

# MASSACHUSETTS PLOUGHMAN

DEVOTED TO AGRICULTURE, HORTICULTURE, THE FARM, THE GARDEN.

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AGRICULTURAL.

Remedies for the Horn Fly.

The most satisfactory way of preventing the attacks of the horn fly is to apply some substance that serves as a repellent; the best results according to entomologist Weed, are obtained by the use of a cheap oil, such as fish oil or crude cotton-seed oil, to which a small amount of carbolic acid or pine tar has been added. Either of the following formulas are recommended for this purpose:

1. Crude cotton-seed oil, or fish oil, three parts. Pine tar, one part.
2. Crude cotton-seed oil, or fish oil, 100 parts. Crude carbolic acid, three parts.

In either case these substances are to be mixed, and applied rather lightly to the cattle by means of a wide paint brush, a sponge, or even a woolen cloth; the combination immediately drives off the flies, and remains on in condition to keep them off for about five days. A combination of kerosene emulsion and tobacco decoction may also be used with good effect.

Stock and Dairy Notes.

A farmer in Pennsylvania reports having fed sunflower seed to milch cows on an extensive scale with very satisfactory results. He uses the following ration per animal daily: Four pounds of ground sunflower seed, six pounds of ground barley, 15 pounds of clover hay, and thirty pounds of silage.

While pastures generally have made rapid growth this spring the grass is therefore less nutritious than usual, and when stock are turned upon it they should be watched very carefully and not allowed to scour and lose flesh. It is always best to make the change from grain to grass gradually, or feed some grain always when stock are turned to pasture.—Farmers' Guide.

Ignorance has established the erroneous custom of calling milk rich, when it is merely rich in fat, an ingredient which is found in nearly all milks in too large proportion to make it most desirable for food, while it is poor or deficient in all those qualities which are so essential to the production of growth and a good condition, viz., casein, sugar, etc.—E. A. Powell.

Among the troublesome things in the dairy, and one that affects both the cow and the milk alike, is the presence of warts, more or less pendant and numerous upon a cow's teats. They are often the more disagreeable because by the act of milking they frequently cause sores which lead to kicking cows and all the disagreeable consequences which follow. This kind of warts are easily removed by an application of castor oil. One or two applications will clear off the warts and render the teats smooth, soft and pliable.—Practical Dairying.

An old sheep keeper says that good fat sheep never lose their wool. Wool

is lost through lice, ticks or scab, due to a mite, and none of these insects can endure fat. A poor sheep is always their feeding ground. If wool is the principal object of breeding, then a ram should be selected with plenty of wool-bearing surface and yielding a washed fleece of at least fifteen pounds. His wool should be of strong fiber and coarse crimp. A ram should not have a ewe's fleece.—Farming.

The Velvet Bean.

This leguminous crop has been grown in some parts of the South as an ornamental vine for a number of years, and is now beginning to be recognized as a valuable forage crop and soil renovator, says a recent bulletin. The plant has attracted considerable attention among the farmers of the Gulf States, but its use for forage, green manure and soil renewing is as yet the exception rather than the rule. It seems, however, that in regions where it can be successfully grown it may become a rival of the well known cowpea.

The plant is described in a bulletin of the Florida Station as follows: "The pods are very thick and leathery; do not crack open when ripe, and are difficult to open by hand. The pods contain from three to five large, plump, fine-looking beans, irregularly colored with purplish and brownish patches. The foliage is much like that of other beans. The vines grow from ten to twenty feet in length."

The velvet bean seems to thrive best in the extreme South and cannot be grown with success as far North as the cowpea. A culture test was made at the North Carolina Station. The seed started slowly, but when the plants once were well established they made vigorous growth. Owing to the long season of growth of the plant it did not bloom until September 20, and was injured by frost about a month later. Only a few pods were full grown at this time and no seed ripened.

The Preservation of Grape Juice and Sweet Cider.

The manufacture of unfmented grape juice and of sweet cider assumes considerable proportions in many localities, but difficulty is often experienced in preparing a product that will "keep," i. e., does not ferment, says a recent Farmers' Bulletin.

Permentation is due to the presence of micro-organisms in the juice or cider, and may be prevented by sterilizing the latter as well as the vessels used in connection with the bottling of the product. Heating is the simplest, safest, and most effective means of sterilizing, but great care is necessary in order to so control the temperature as to secure thorough sterilization without injuring the flavor of the product. A report of the Canada Experimental Farms gives an account of a series of experiments on the best means of sterilizing grape juice. The conclusion, which probably applies to sweet cider as well as to grape juice, was that "the natural flavor of grape juice may be preserved intact by raising the temperature of the juice gradually to 170 degrees F., keeping it at this point ten minutes and then quickly bottling it, taking care to use absolutely air-tight and thoroughly sterilized vessels. These vessels should be taken from a tank or kettle of boiling water, immediately filled and corked or covered with the least possible delay."

The use of antiseptics such as salicylic acid, is considered unwise. They are unnecessary, and unless used with great caution may be injurious to health.

If the nursery trees were large and the root much injured when received, better cut back the top to balance the tree, else the whole tree may be lost when the next drought comes on.

EARLY peas followed by late cabbage, or early potatoes by ruta bags turnips make profitable successions of crops for New England. The second crops should be hurried forward by use of nitrate of soda or any good phosphate. Celery is one of the best second crops when the product can be sold.

Protecting Peach Trees.

Various methods have been tried for protecting peach trees from injury by frost. At the Illinois Station the use of evergreen branches, cornstalks, and coarse straw for covering peach trees after laying them down has given fairly good results.

At the Kansas Station young peach trees were protected by removing the more wide-spreading branches, shortening the others, drawing the branches in toward the main stem and surrounding them with evergreen branches, which were held in place by cords wrapped around the tops, the bundles thus formed being supported by stakes driven about the tree. The protected trees bloomed more freely than the unprotected ones, but the benefit of the protection was not considered sufficient to make the method practicable. Laying the trees down, staking them, and covering their tops with hay and brush and their roots with soil was tried during two winters. The trees thus protected blossomed more freely than unprotected ones and set fruit well. The unpruned side roots made sufficient growth to support the tree without the roots at the front and back, and the latter were so short and fibrous that it was not necessary to cut them a second time. The trees laid down blossomed earlier than the others, the flower buds opening under the covering in many cases, while the buds on standing trees were still closed. This may be a disadvantage in the case of late frosts after the trees are uncovered. The cost of protecting seventy-one trees in this way averaged about twenty cents per tree.

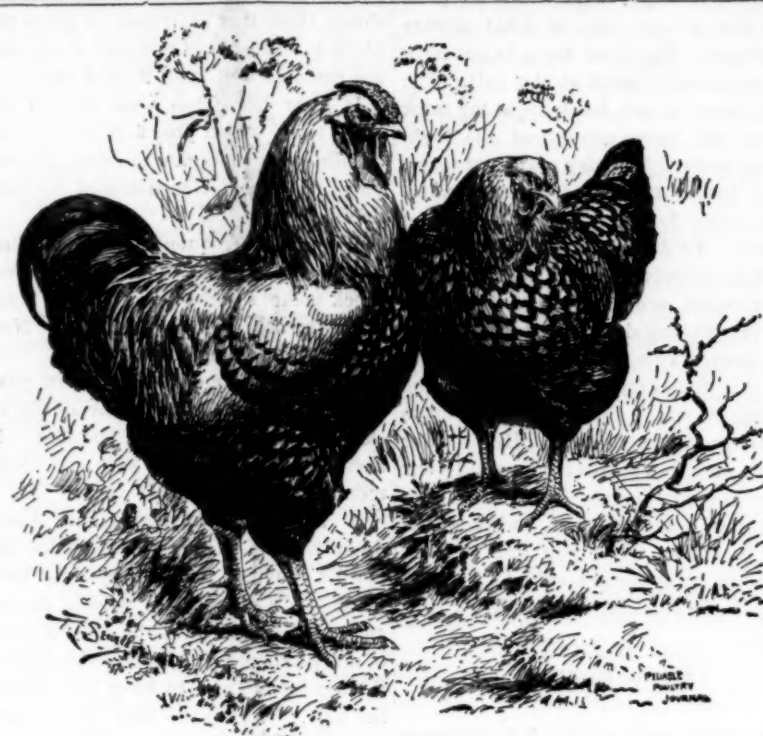
Swamp, Marsh, or Muck Soils.

The great value of these soils when properly reclaimed has led European farmers and investigators to devote much attention to their utilization, and increased attention is being directed to the same subject in this country, says Farmers' Bulletin, No. 78. The salt marshes, especially along the New England coast, have been extensively used for many years for the production of forage, and in many cases expensive and elaborate systems of reclamation have been carried out on them. Reclaimed swamp or muck soils are being extensively utilized in Michigan, Ohio, and other regions for the production of celery and onions for which they seem to be peculiarly adapted. Several of the experiment stations, notably those of Wisconsin, Indiana, and Michigan, have undertaken to study the best means of reclaiming such soils.

While the conditions vary considerably in different cases and each soil may present some peculiar conditions of its own, the general principles and practices are the same for all this class of soils. Thorough drainage is the first essential. This is not only necessary for the purpose of removing the excess of water, but to allow the free circulation of air in the soil, in order that the poisonous compounds which are usually present may be oxidized and thus rendered harmless, and that the processes of decomposition and nitrification so necessary in this class of soil may be set up.

The drainage is best accomplished at first by means of open ditches at frequent intervals. Muck soils settle greatly when drained, and if tiles are laid in the soft muck they will rise toward the surface, and thus become ineffective. Draining is most effective when carried out gradually, and the soil should not be allowed to dry out too quickly, since its mechanical condition may be thus injuriously affected, its absorptive power for water in many cases almost completely destroyed, and the decomposition of the organic matter greatly retarded. After the soil has become firm tiles may be laid, especially if collars are used.

The Indiana Station has shown that in case of the black soils of that State, which are probably representative of a class, tile drainage is effective only when the sand and gravel which underlie such soils are tapped. By sinking in this underlying layer of sand or gravel a series of wells which are connected with tile at the depth at which



SILVER WYANDOTTES.

It is desired to maintain the water level, the soils may probably be thoroughly drained without difficulty.

It is frequently found that muck soils, even after the most careful draining, are still unproductive. The fertilizing matter which they contain is in unavailable condition for plants. A common practice in Ireland and in European countries is to pare the surface and after drying to burn the organic matter. This practice of burning has been condemned as exhausting to the soil, but without good reason. The burning should not extend more than twelve to sixteen inches and it destroys very little available plant food. It is recommended as one of the quickest methods of putting muck soils into condition for the growth of crops.

The ashes and charred matter spread over the surface of the soil greatly improve its mechanical condition, while the burning increases the solubility of the organic compounds in the soil. It frequently happens that muck soils have to be liberally manured before they will produce remunerative crops. From the nature of their formation such soils are likely to be deficient in phosphoric acid and potash, and the experiments of the Wisconsin Station have shown that, notwithstanding the fact that they are often composed almost entirely of organic matter containing large amounts of nitrogen, the available nitrogen in them is frequently very deficient.

The first object sought in fertilizing should be to correct the acidity of the soil and to set up the processes of decomposition of the organic matter and nitrification, so as to convert the inert into available plant food. Liberal applications of decomposing manures, such as barnyard manure, in connection with dressings of lime have usually been found effective for this purpose. As the Wisconsin Station has shown, lime and the bulky manure exert a beneficial effect on the texture of the soils, rendering them more porous, and thus improving drainage and increasing aeration and nitrification. Liberal applications of wood ashes also improve the texture of the soil, correct acidity, and favor nitrification, and at the same time furnish potash and phosphoric acid, which are likely to be deficient. The by-product from steel manufacture, known as Thomas slag, is used with good results on such soils in Europe. It is rich in lime and thus effective in correcting acidity and promoting nitrification, and it also supplies phosphoric acid. It is generally applied in the fall in connection with some potash salt such as kainit or muriate of potash. It is doubtful, however, whether this slag can be obtained in the United States at a price sufficiently low to justify its use for this purpose. A dressing of lime (thirty to forty bushels per acre), followed by an application of a mixture of kainit or muriate of potash with some cheap phosphate, such as fine-ground Florida phosphate, may be substituted for the slag mixture. The untreated mineral phosphates have been used with advantage on muck soils, the decomposing organic matter assisting in rendering the phosphoric acid available.

Covering bogs with a layer of sand or gravel four to six inches thick has been successfully practiced in Ireland and European countries, but it is doubtful whether this method is generally applicable in the United States.

Oats, potatoes and buckwheat have been found to thrive better than wheat or clover on recently reclaimed bogs. The grasses generally have been successfully grown on such soils, and, as already stated, they seem to be well adapted to celery and onions and are extensively used for the growth of these crops. In Europe sugar beets are grown with good results on such soils.

The Mildew of Lima Beans.

In common with all other flowers of the papilionaceous type, such as the pea, locust, wistaria, etc., the conspicuous portions of the bean flower consist of two upright petals joined together and known as the "standard;" two narrower petals, distinct, projecting forward below the standard and known as the "wings;" and a fifth petal in the form of a closed, spirally coiled tube occupying a position between the standard and the wings, and called the "keel." At the base of the keel is the ovary or young pod surrounded by the stamens and prolonged upwards into the style. The long stamens and style are completely enclosed in and protected by the keel.

Under such conditions cross-fertilization would seem to be impossible, especially as the pollen is shed abundantly from the anthers, which are borne upon the stamens in close proximity to the upper portion of the style, and neither the stigma nor the anthers appear beyond the end of the tube in which they are enclosed. But the wings form a convenient resting place for visiting bees in search of nectar, and in case a bee lights upon them his weight deflects them and at the same time draws the keel down and backward, thus causing the stigma and hairy portion of the style covered with pollen to protrude from the mouth of the tube. As the insect plunges his head into the flower, the stigma and pollen-laden style come into contact with his abdomen and cross-fertilization is assured by subsequent visits to other flowers. But fungus infection is assured with hardly less certainty, provided the bee has previously had contact with the spores of the fungus. In that case we should expect to find the first attack of the fungus at the two points where the bee, in his search for nectar, touched the more moist and delicate tissues of the flower, viz.: on the style and at the base of the ovary or pod.

A large number of flowers was examined and this supposition was strikingly confirmed. The mildew was found in many of the flowers, and in every case it occurred on the spots above mentioned and nowhere else. It seems certain, therefore, that the spread of this mildew is largely due to the agency of insects, particularly of bees, and this view is further confirmed by the fact that in the case of young pods the mildew almost always appears first

at the base or tip and very rarely in the middle.

That the wind also plays an important part in the dissemination of this mildew, seems certain. When the vines are seriously mildewed, the fungus frequently appears first, not at either extremity, but upon one side of an almost mature pod, and generally on the side farthest from the vine and least protected by leaves. Thaxter has also noted its occurrence on the leaves.

Neither of these cases can be due to infection on the part of insects, and we must conclude that the spores may be carried by the wind, or that water falling upon and dripping from infected portions may carry the spores down to sound pods hanging beneath. That mature, uninjured pods can be infected with the fungus, and that the wind can disseminate it, is indicated by the following facts.

The lima beans on the Station grounds are on high land composed of a light sandy soil, and have never been affected with mildew. The rows run east and west. Directly south of them at a distance of about one hundred feet, but separated from them by a pile of lumber and a few trees, are two rows of bush limas running north and south. On August 14th, when the mildew had been abundant in the neighborhood for a month or more, the Station vines were examined and found to be entirely free from the fungus. A few mildewed pods were brought from a distance, and the spores from one of them were rubbed and dusted on the surface of a sound and nearly ripe pod at the east end of each row of the pole limas. Within a few days the mildew made its appearance on the infected pods, and from this point of vantage, the prevailing winds at the time being from the northeast and north, it swept down both rows and in two weeks the whole patch was completely mildewed. The spores had also been carried over a distance of one hundred feet to the bush limas and the mildew, beginning at the north end of the rows, that is, at the point nearest to the pole beans, spread rapidly down the rows. It is evident, then, that spores placed upon the surface of a sound lima bean pod were enabled to start the disease, which thereupon spread with great rapidity in the direction of the prevailing wind.

The dissemination of this fungus has thus been fairly accounted for; whence it comes in the spring and how it bridges over the winter, is another question. Since it can hardly be imagined that the delicate summer spores could withstand the winter, the fungus must perpetuate itself either by means of its vegetative threads or by resting-spores as in the case of certain related fungi. In the particular group to which the lima-bean mildew belongs, there are but four species. One is the dreaded potato mildew, *Phytophthora infestans*; the second, *Phytophthora Cactorum*, infests principally various species of the cactus family, and in this species resting spores or "oospores" are known to occur; the third is the tobacco-mildew, *Phytophthora nicotianae*, from Java, which also produces oospores; the fourth is the species here discussed. No oospores are, with any certainty, known to occur in the potato mildew, and the most careful search has failed to discover them on the lima bean. It is possible that by keeping the refuse of a mildewed crop under constant observation throughout the winter, oospores may be found to develop, but it seems more probable that, like the potato mildew, this mildew depends for its propagation upon its mycelium. In either case it can be perpetuated only in the remains of the plants infested by it, and the precaution of burning all such refuse in the autumn is therefore of primary importance.

It will be inferred from what has been said regarding the dissemination of this mildew, that its prevention by means of fungicides presents many difficulties. Being carried to the flowers by insects and there being protected by the conformation of the flower itself, it is impossible to reach it with fungicides or to protect the ovary from its attacks. The period of blooming too, is so long in the case of the bean that the danger of infection through the flowers con-

tinues practically throughout the whole season, and there is no possible means of preventing it. The only thing that we can hope to do by the use of fungicides is to protect the maturing beans from the spores which are borne to them by the wind or by water. And here a difficulty presents itself arising from certain defects in the method of culture usually employed. Most growers allow three or four vines to each pole and slant the poles so that the tops of two adjoining poles meet. The consequence is that every pole is overloaded and the vines, reaching the top and there uniting and continuing their growth, produce a dense mass of leafage which effectually prevents anything like a free access of air and sunshine to the pods. At the same time this renders it very difficult to reach the pod with a fungicide. It is reasonable to suppose that by allowing, at the most, two vines more than to compensate for their decreased number.

Various fungicides have been tried, and notwithstanding the continuous wet weather which was at the same time favorable to the mildew and unfavorable for spraying, the difficulty, always experienced in a test experiment, of attempting to prevent infection on one row or group of rows in the face of menace from unsprayed rows immediately adjacent, and the fact that we had to deal with a fungus easily disseminated by every breeze and developing with extraordinary rapidity, yet the results obtained were worthy of notice.

For fungicides were used, viz. Bordeaux mixture in the proportion of five pounds each of lime and copper sulphate to fifty gallons of water; ammoniacal copper carbonate, made by dissolving six ounces of the carbonate in three pints of strong ammonia and diluting to fifty gallons; potassium sulphide, one ounce to two and a half gallons; and flowers of sulphur applied dry. The ammoniacal copper carbonate was not used at first, but only as a substitute for the Bordeaux mixture in the later sprayings, when it was desired to preserve the clean appearance of the pods.

We will examine first the method of treatment and the results obtained on the farm of Messrs. Atwater Bros., as follows:

Row 2, Bordeaux, three applications, Am. sol. Copper Carb, two applications, 296 marketable pods (2 pecks); Row 3, 25; Row 4, sulphur, two applications, potass. sulphide, two applications, 16; Row 5, 13; Row 6, potass. sulphide, three applications, sulphur, one application, 68; Row 7, 11; Row 8, Am. sol. Copper Carb, one application, potass. sulphide, one application, 55.

Each row contained forty-four poles. The first application was made on June 23rd, the last on September 7th. The mildew made its first decided appearance about August 10th.

The value of Bordeaux mixture in checking the mildew is apparent from the figures given. Row two is the only one which yielded any considerable crop and the figures here would have shown a still more favorable result but for the fact that two or three weeks previous to the test gathering, through misunderstanding, a quantity of beans was picked from this row as stated above.

On row four treatment was begun with sulphur, but it soon became evident that the treatment was inefficient; it was also very difficult to apply the sulphur when the vines had attained their growth, and potassium sulphide was therefore substituted. The single application of sulphur on row 6 was due to an error, but it can hardly be considered as vitiating the general result.

The conclusion to be drawn from this experiment is that even in a season most favorable to the lima-bean mildew, thorough treatment of the vines with Bordeaux mixture will insure a crop.

In conclusion it must be borne in mind that much can be done by the grower apart from the application of fungicides, to lessen the susceptibility of lima beans to mildew. The selection of well-drained land and a light soil is important, but above all, care must be taken, by reducing the number of vines in a hill and by planting the poles erect, to insure conditions as little favorable as possible to fungous disease. With these precautions it should be necessary to resort to the use of a fungicide only in exceptionally damp seasons.—Wm. C. Sturgis in the Com. Exp. Station report.







## POULTRY.

## Spring Laying Hens not Over-fat.

If the hens are laying as well as they ought to be now, there is not much danger of getting them too fat. Examine almost any hen in late spring and she will be found rather poor in flesh, light in weight, with breastbone sharp. The strain of continuous egg production for months keeps them from laying on fat no matter how freely they are fed. Even if the ration includes a great deal of corn and corn meal, there will be little danger of their laying on too much flesh. In the fall and winter there is a good deal of over feeding done, but in spring it is true that many poultry keepers underfeed.

## Nothing Like Meat.

Fresh meat is the greatest of egg producers; a pound of it at the right time will do much more good than a pound of grain, especially when hens are inclined to over-fatness. Often when hens fall to lay a ration of meat twice a week will be enough to start them. Price scraps will not do so well, and much fish is liable to give a bad flavor to the eggs. Waste meat can often be bought at the markets for hardly more than the cost of grain, and on every farm there is a good deal of animal food that costs nothing at all. It ought to go to the hens. Just at this season of the year when worms and insects are so abundant but little other meat is needed. A feed of it once a week is enough, provided the hens have a chance to hunt insects at will.

## Gape Disease.

Gapes are found mostly in chicks running on low, damp places. It is caused by a small worm in the wind-pipe, and the only cure is to remove the worm. This is sometimes successfully done by putting the chicks in a box, covering the top with a piece of muslin, and dusting fine lime through the cloth; by breathing the lime the worm will get out of the membranes, and by the coughing and sneezing of the chick will be dislodged. To prevent gapes do not keep your chicks on ground where fowls have previously been. If kept on the same ground, spade old ground up each year. Campbor in drinking water also prevents gapes. Take a piece of campbor the size of a cherry stone and add twenty drops of turpentine to a quart of drinking water.—John Bauscher, Jr.

## Poultry Notes.

Over fifty hens should never be kept in a single pen. Twelve to twenty-five is better.

Dump a few sifted coal ashes into the poultry yard. The hens will eat a good many of the cinders.

For scaly legs, a good enough plan is to dip the legs into a dish of kerosene once or twice a week for a month.

Keep the hens tame. It is more satisfactory taking care of them and there will be fewer hens with rupture and broken eggs.

Worms come very close to the top of the soil this moist weather. A few strokes of the spade will turn up hundreds of them, greatly to the delight of the hens.

Green cut bone is excellent, but it is very hard work grinding it if average bones are taken. It is better for small poultry keepers to buy the cut bone of some one who has a power machine.

The Black Langshan Plymouth Rock cross is splendid for winter laying. Eggs are large and quite dark. Their flesh is of better quality than that of Plymouth Rocks. This cross is very hardy and vigorous.

A good poultry yard can be made with five-foot netting above a one-foot board. Do not have anything at the top for the hens to see to fly at. A lower fence will do for the heavy breeds or where their wings are clipped.

Chips from marble quarries are used for grit in some sections. This material is not so hard and sharp as granite or mica grit, but it is well liked by the hens and furnishes a good deal of lime for the shells. At this season of the year it is located on gravelly soil which is spaded up occasionally, they will need no artificial grit.

Hens in small lots suffer considerably if grit is not supplied. A good deal of the grain is only partially digested and is not put to the best use. Sometimes indigestion results. A hen without plenty of grit is like an old man who has lost his teeth. She can eat, and perhaps keep in fair health, but is of comparatively little value as an egg machine.

Do not leave many eggs in the nests, unless it is desired to have setting hens. Five or six eggs will often start a hen to setting when otherwise she would never have thought of it. In the spring

season when all the hens are laying, there ought to be one nest for every three or four hens in order to keep the eggs from accumulating in one nest during the day, causing broody hens and soiled or broken eggs.

## The Care of Fruit Trees.

In the Agricultural Epitomist E. J. Rayburn writes as follows on this ever important subject: Nothing gives a more untidy appearance to fruit trees than suckers growing about them. Young orchards must be examined at least once a year and have all the suckers carefully removed.

For young trees this work should be done early in the spring, as cutting away any considerable portion of wood and leaves has a tendency to retard growth. From large trees it is better to take off suckers while the trees are growing freely, as the work may be more effectively done and they will be less liable to start again. Do not cut suckers off with a knife in such a way that short stubs will be left to sprout a second time. If the sprouts are small they can be easily removed by grasping them one at a time with both hands. A quick jerk will separate it to the base.

My experience goes in favor of training fruit trees low for two reasons. They resist storm better, protect their roots from the effects of drought, the bark on the trunks is not damaged by the action of the sun, and the fruit is gathered easier and more cheaply.

Apple trees grafted or budded above ground are worth more than those grafted on the roots for the reason that they will pay for themselves by their early fruitfulness long in advance of the root-grafted trees. Orchards should be well cultivated, and attended to in every way in order to have nice fruit. To keep off insects apply strong live soap to the body of a tree, letting it run down to the roots. I have tried this and find it the best medicine I have ever used.

If any farmer thinks that nature can be cheated, and that after cropping land until it will no longer produce anything, it can be set to fruit trees and made profitable, he will find himself greatly mistaken.

We hear sometimes that a young orchard is on too rich ground, that the trees are growing to wood when they should be bearing fruit. But wait a few years and these backward trees will prove far more valuable and long lived than those set to bearing because of their own stunted growth. If a thrifty, growing orchard does not bear as it should, does it pretty heavily with some mineral fertilizer, phosphate or potash; or if these fertilizers cannot be obtained, give the trees a dressing of salt.

I am an old fruit raiser and have been very successful; so let me give a few more items before I close. No greater boon could be bestowed upon the gardening world than to reduce all horticultural operations to their first principles, and to lay bare the cause why in one case one mode of procedure is advisable and another in a different case. In planting seeds for the purpose of growing improved varieties, care should be taken not only that the seeds should be taken from the finest existing kinds, but also that the most handsome, the largest, and the most perfectly ripened specimens should be those that supply the seeds.

A seedling plant will always partake more or less of the character of its parent, the qualities of which are concentrated in the embryo when it has arrived at maturity. It should, therefore, always be an object with a gardener, in selecting a variety to become the parent of a new sort, to stimulate that variety by every means in his power to produce the largest and most fully ripened fruit that it is capable of bearing.

## Why Oh! Why?

Prof. Haecker, of the Minnesota Experiment Station, has made the most exhaustive experiments on the cost of producing butter, showing what the cow has to do with the cost.

It required only one year of close experience with the herd to cause Prof. Haecker to ask of himself the following questions:

"Why does this cow produce butter for eight cents while this one charges us sixteen cents?"

"Why does this Short-horn produce me butter for twelve and two-tenths cents, while another Short-horn charges me eighteen and two-tenths cents?"

"Why does this Holstein produce butter for nine cents, while the other cow, also a Holstein, charges us seventeen and one-half cents?"

The above "whys" are taken verbatim from Prof. Haecker's address on that subject.

What do these "whys" indicate?

1. That it took only one year of close

## A Hole in Your Pocket.



The butter fat that is being lost in the ordinary process of dairying is worse than a hole in your pocket and through which your coin may escape. The best way in the world to stop the leak is to use a

SAFETY HAND for a little herd and LITTLE GIANT for a larger one.

P. M. SHARPLES, West Chester, Pa.

BRANCHES: Elm St., Omaha, Neb.; Duquesne, Iowa.

observation, trying to find the truth, to disclose the fact that some cows in that herd were costing one hundred per cent more than others to produce their butter. And yet there are thousands upon thousands of cow keepers in these United States, who have kept cows for years, who think for that reason that they know all about cows, who have not the faintest idea of this big important fact.

2. These facts indicate that if such things are true in the Minnesota Station herd, selected as it is with care, how much more true must they be in the herds of the average dairy farmer throughout the land?

3. These facts indicate the necessity for every dairyman to institute some means of knowing what his cows are doing; what they are charging for their butter. Prof. Haecker does not stand alone in finding out these facts. Everywhere all over the land are quiet, reading and thinking farmers, who with the Babcock test and the scales, have found the same state of affairs in their herds.

4. The fact that by looking into the work of his herd, every man can save himself the cost, the waste, the useless expenditure of keeping a lot of cows that are eating up all his profits, is a sharp indication of where the money goes with a great host of dairymen.

5. It indicates that it will pay a cow keeper to set himself to asking "why?" There is ten times more money in such questioning, than there is in trying to save a dollar or two by not taking a good paper that brings such facts to light. The men who keep these wasteful cows are very largely those who say they can't afford to buy a little valuable knowledge. They have strange ideas of economy. They can't afford to know the truth, or put the truth into practice. But they can afford to keep cows that charge them one hundred per cent more for what they give than some other cows will, and they can afford to remain in ignorance of this great waste.—Hoar's Dairyman.

## Shares in Sheep.

Eastern hill farms will never return to old-time productiveness until again trapped, fed and manured by sheep. Large flocks cannot be kept now, but as fertility of pastures increases the number may be increased gradually until a high degree of extensive agriculture results.

Dogs are a great hindrance of easy success, but are they so troublesome and persistent as wolves and foxes in the days of our ancestors? Moreover, is it harder to combat dogs than to take ravenous prices for beef or dairy product? If decisive legislation against dogs cannot be enjoyed at once, there are other means. "I bell every second sheep," says a flockmaster. "Bells are not costly, and I never lost a sheep with one on, nor had a belled flock attacked." He keeps two flocks of twenty or twenty-five to clean pastures for his Jersey cows. "Let a pair of Angola goats run with the flock," is the advice of some. They are believed to beat off their horns any dog. The horned Dorset sheep is also recommended in this particular.

But most dog depredations are committed at night, and can be avoided by nightly folding the flock in the old manner practiced by American and Holy Land pioneers. This calls for less labor than getting the cows and milking twice each day. Dairies replaced by flocks bring great encouragement to farmers' wives because they have less help to board and no milk to take time and care. The lessening of the bill for hired hands is in itself a factor toward success with sheep. Sheep are invaluable as cleaners and improvers of land.

In reply to the query, "How much do your sheep return?" a practical shepherd said to me: "One hundred per cent in cash from selling wool and lambs, besides doing the pastures good and paying for all they consume." He does not raise hot-house lambs either; they would make his profits still greater. Almost any young man can begin with a small flock and learn to care for increasing numbers as his pastures and circumstances permit.—Hollister Sage.

Young colts should be at school just now, as well as children. Begin now to train them in the way in which they should go. Teach them to be handled halter-break them, and teach them ways of gentleness that will make them more valuable horses.—Exchange.

HOOD FARM, Lowell, Mass.

BUTTER BRED BULL FOR SALE—Dropped Nov. 30, 1897. Sire, Hood Farm Fergus has a record of 17 lbs. 6 oz. and has given 22,371 lbs. milk in the last two years. Dam, Fancy Bee, test 16 lbs. 6 oz., by Fancy's Harry, sire of 87.2 dam, Bee-weaver, test 17 lbs. 5 oz. in the list; 3d dam, Bisma 3d, dam of 3 in the list.

Write for price.

HOOD FARM, Lowell, Mass.

## APIARY.

## Profitable Colonies of Bees.

A weak colony of bees can never store any surplus honey to speak of, it matters not how well you may fix them up with all the latest improvements in the way of hives and honey boxes.

There is another class of colonies that will not prove profitable, and these are ones not properly arranged. It is only the strong colonies with the surplus boxes properly adjusted and attended to with regularity that store the large honey crops.

A colony may be very strong, and in every way in first-class condition to store honey, but from the fact that the surplus honey boxes are either not put on at the right time, or that they are improperly adjusted to the hive, or that the amount of space given is too small, the bees will be deterred from storing honey rapidly.

The most important things to know and to do are, first, to know just when surplus boxes ought to go on the hive, and, second, the necessary amount of storage room to give. In the first case, when a colony of bees becomes strong so that they are cramped for room in the brood chamber, they should be given more room by placing on the surplus honey boxes; this, of course, to apply to the approach of the honey season, or at any time when honey is being gathered.

Previous to the honey harvest, when colonies become strong and are confined in limited quarters such as the brood chamber alone, they will very soon make preparations to swarm, and when this occurs, adding of space afterwards will not change their minds, but would have prevented them if the work had been done in time. Hence it is of considerable importance to keep the bees provided with ample room just at this time. A good colony of bees during a good honey season will need three times the space to store honey that the brood department occupies, or, to make this more plain, we will say that they will fill three hives of the same size as the one they originally occupied.

We cannot expect the best results by putting on our honey boxes at the beginning of the honey flow, and then giving them no more attention until the season is over. It is proper to remove the surplus honey just as fast as they complete it, and substitute empty boxes in the place of full ones, and thus constantly keep them busy at work, and do not allow them to have completed the work of filling the boxes and stop work for want of room.—A. H. Duff, in Farm, Field and Fireside.

## Farm Managers.

There is an increasing class, especially in the neighborhood of the larger cities, of wealthy men who own farms, and who desire the services of competent farm managers, the owners being in other business. These gentlemen have very crude notions in regard to the profits of farming, and some of them imagine that the most lavish expenditure of money in fitting up a grand country place ought to return a handsome profit on the investment. Building the most costly of barns and dwellings, and investing fabulous sums in the purchase of highly bred animals, they seem to think that the ordinary returns from farming these places should show a profit and when they do not, the owners are inclined to blame the farm manager, when in many cases it would be impossible to make a profit on the great expenditure, at least for many years to come.

Then, too, when these gentlemen employ a farm manager, they imagine that they should get a man with all the sciences applicable to farming at his fingers' ends, and a man capable of being at once a skillful farmer, horticulturist and stock breeder, all in one, for the wages of a farm hand. When therefore the men they hire for \$25 to \$40 per month turn out to be incompetent, they complain that farm managers, as a class, are worthless and extravagant. Many men who own farms go right ahead and run the farm into all sorts of extravagant purchases without consulting the farm manager and then blame him for the failure to make it pay.

Low-priced men are seldom effective in any line of work, and where a man wants a competent management, he must pay what the service is worth. We know of one farm manager who is said to be paid \$5,000 per annum, and when the owner of the property died the heirs were so impressed with the value of his services that he has been retained at the same pay. That place has paid the owners \$60,000 a year, but if a \$25-a-month man had been there, in all probability the place would have been stopped before the owner died. You cannot expect a general for the pay of a corporal, nor a competent farm manager for the pay of a farm hand.

Then, too, when a land owner wants a farm manager he should not only pay a competent man a worth, but he should be content to leave the management to him. If he cannot be trusted with the entire management, he is not the man wanted, and no really competent farm manager will submit to having his plans interfered with by one less competent than himself. The trouble with the owners comes from a low estimate of the value of competent superintendence.

Some years ago at one of the state agricultural colleges they were trying to elect a president. One member of the board urged the election of a gentleman because of his experience as a practical farmer in addition to his scientific education. The Governor of the state, ex-officio chairman, asked what they wanted with a farmer at the head of their college, as he could hire a farmer for \$20 a month, and he thought that a college president should be a gentleman of great learning and not a farmer. The reply was made, "Why do we have agricultural colleges then, if boys are to be taught that they can only expect \$20 a month after they have graduated as farmers?"

And all through what is particularly called "professional" life the same idea of the value of a farmer is held, and the result is seen in the colleges we establish to teach agriculture to the young men; they have hardly a handful of students in agriculture, and many of the oldest of the agricultural colleges would have hardly anything for their faculty in agriculture to do but for the winter short courses they have gotten up to give the young men a sort of a smattering of the art in some of its lines.

When wealthy farm owners realize that a competent farmer is the peer of any man in any other profession, and is worth as much as educated men are worth in other lines of human effort, there will be some inducement for young men to seek a complete course of study in agriculture, and to prepare for the responsibilities that fall to the heads of great enterprises.

Nine out of ten advertisements that appear in the farm papers for farm managers say that they want a man perfectly competent in his profession who has a wife who will tend the dairy, and will not have any children. The men who put such advertisements in the papers do not get farm managers, for no competent man is going to hire his wife or promise not to raise a family. Men who do these things are merely laborers and not managers and the places where such practices prevail are not worth the services of a manager. No small farm can afford to hire a manager and expect profit. A man competent to manage should have a place large enough to need a manager who is not merely a leading hand, and only on such a place can a real manager be profitable.—Practical Farmer.

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The Ontario experiment farm at Guelph is experimenting with a milking machine which it brought over from Scotland. It is found that the milker saves considerable labor, and with a few improvements and changes it is expected to become practicable to do all the milking by machinery. One of the worst defects now is that the cupping allows dirt and impurities to get into the milk. The action of the machine imitates somewhat the sucking of a calf, and it is said that cows behave more quietly than when milked by hand.—Exchange.

The drummer who tries to talk a merchant into purchasing a bill of goods may be handicapped by a face rendered unsightly by pimples and blotches and by a foul breath. Some men imagine that bad health does not handicap them in business. A bigger mistake was never made. The slightest disorder may be the biggest kind of a detriment to a business man. An unsightly skin is caused by impurities of the blood. A foul breath means a weak stomach, an impaired digestion and an inactive liver. A sweet breath means that the stomach is sweet, the digestion good, the liver active and the bowels regular. It is an indication of a thoroughly constitutional sweetness. Dr. Pierce's Golden Medical Discovery strengthens the stomach, facilitates the flow of digestive juices, gives edge to the appetite, makes digestion and assimilation perfect, invigorates the liver and purifies and enriches the blood. It is the great blood-maker and flesh-builder. It is the great blood-purifier. It makes the eye brighter, the skin clearer, the breath sweeter and the step more elastic. It imparts both mental and bodily activity. It cures all diseases resulting from impurities in the blood. Found at all medicine stores.

"I was a complete wreck; appetite gone, nervous system impaired, could not sleep, and was so weak that I could not stand on my feet ten minutes," writes Miss Ella Bartley, of No. 275, South Grant Ave., Columbus, Ohio. "I only weighed 95 pounds. Dr. Pierce's Golden Medical Discovery cured me and now I have an excellent appetite, sleep soundly and my friends say they never saw me so well."

A man or woman who neglects constipation suffers from slow poisoning. Dr. Pierce's Pleasant Pellets cure constipation. One little "Pellet" is a gentle laxative, and two a mild cathartic. All medicine dealers sell them. No other pills are "just as good."

MOSELEY'S OCCIDENT CREAMERY FOR TWO OR MORE COWS. PERFECT CREAM SEPARATOR. SEND FOR CIRCULARS. BURLINGTON & FRITCHARD BROS. CO., CLINTON, IOWA.

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is one of the three important ingredients of a complete fertilizer; the others are phosphoric acid and nitrogen. Too little Potash is sure to result in a partial crop failure.

## Free

An illustrated book which tells how Potash is, how it should be used, and how much Potash a well-balanced fertilizer should contain, is sent free to all applicants. Send your address.

GERTIAN KALI WORKS, 93 Nassau St., New York.

## Raise Hens

People living just outside cities and large towns can (owing to their nearness to markets) make large profits in the poultry business. No other occupation pays better or is easier to conduct. It can be successfully carried on by women or boys and girls; provided they have a knowledge of the right methods of management, feeding, etc. This may easily be gained by faithful study of that best and most practical poultry paper,

## Farm-Poultry

It teaches how to make money raising poultry and eggs for market. It is edited by practical poultry raisers, who tell their readers how to prevent and cure all poultry diseases; bring pullets to early laying maturity; make hens lay when prices are highest; build the best houses and yards; keep poultry free from vermin; hatch strong chickens in incubators; capons and dress poultry for market. Published semi-monthly. Price, \$1.00 a year; 50 cents for six months. Sample copy and a 25c book, "A Living from Poultry," sent for 12c. In stamps. L. S. JOHNSON & CO., Boston House No. 1, BOSTON, MASS.

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Every Town, in the U. S. and Canada. We are now distributing \$100,000 in Premiums, Prizes and Cash. We give Bicycles, Cameras, Gold Watches, Guns, Planes, Organs, Deaks of Cash, and many other valuable prizes. Employment if you want it. Now is the time. A. J. JOHNSON & CO., Boston House No. 1, BOSTON, MASS.

CRANBERRY BOG FOR SALE. One of the best Cranberry Bogs in Plymouth County for sale. Located near the ocean and a railroad station, good source of water throughout; easy to drain and can be constructed for about one half what it usually costs; plenty of vines growing on it in the natural state that produce fruit of better quality than most of the Cape cranberries. For particulars apply to EDWARD HEISKY, Cedar Hedge Farm, Hingham, Mass.

IF YOUR CHICKENS Don't Grow, DEATH TO LICE CHINMENT will kill them quick and brighten the broods. Price 25c. per box. Book, Free. D. J. LANGRISH, Box 312, Apopka, Fla.

Owners of Farms If You are desirous to SELL, RENT, OR EXCHANGE Your farm, with or without privilege of buying, now is the time to list them with us. We are constantly having calls for such, and make a specialty of FARM PROPERTY. Send full particulars to

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If you want the BEST strawberries and other small fruit plants, asparagus roots and vegetable plants, send for my 1898 catalogue and see if I cannot suit you as to quality and price. GEORGE F. WHEELER, Concord, Mass.

CHAS. STEVENS, Manufacturer of "Star Brand" and "Beaver Brand" BONE AND POTASH FERTILIZERS, AND EXPORTER OF CANADA UNLEACHED HARDWOOD ASHES, Write me for Price List, Pamphlet and Catalogue. Address

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Dairying for Profit, OR THE POOR MAN'S COW. For 15 cents.

We have made arrangements with the publishers to furnish our subscribers with this valuable little book for only 15 cents. The author, Mrs. Jones, is one who has made a success in this line and knows what she is talking about. She writes in a concise, practical way, treating only of what she has learned in her own experience, which has been a long and varied one, and is worthy of the whole subject. Any of our readers who keep cows, whether one or one hundred, will do well to read this book. Send fifteen cents to the MASS PLOUGHMAN OFFICE, Boston Mass.

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TURKEYS. How to Grow Them.

No book in existence gives an adequate account of the turkey—its development from the wild state to the various breeds, and complete directions for breeding, feeding, rearing and marketing these beautiful and profitable birds. The present book is an effort to fill this gap. It is based upon the experience of the most successful experts in turkey growing, both as breeders of fancy stock, and as raisers of turkeys for market.

The prize-winning papers out of nearly 200 sent in by the turkey growers in America are embodied, and there is also given an essay on turkey culture, from different parts of the country, including Canada and New Brunswick, that the reader may see what ways have proven successful in each locality.

Profusely Illustrated. Cloth, 12mo. Price, postpaid, \$1.00.

Address Mass. Ploughman, Boston.

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## WHEN IN BOSTON, STOP AT THE AMERICAN HOUSE

Hanover St., near Scollay Sq. Situated at the large hotel in Union Station, Boston, situated at Union Station, Boston. LARGEST ROOMS in the city for the price (\$1.00 per day and upward). Steam heat and electric light in every room in the house. \$10.00 has just been spent on the house, giving patrons every modern improvement and convenience at moderate prices. THE PLAY W. P. L. N. The special breakfast at 40 cents and table d'hôte dinner at 30 cents are famous. C. A. JONES.

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## STONINGTON LINE TO NEW YORK.

Express train leaves Park Square Station, New York, at 7:00 P.M., arriving in New York at 7:00 A.M. In time to connect with all early trains. Sleeper, Maine and New Hampshire in commission. Tickets and State Rooms secured at station Park Square, Boston, and 3 Old State House, Boston. L. H. PALMER, Agent, Telephone No. 1840. J. W. MILLER, O. H. BRIGGS, President, Gen. Pass. Agt.

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CASH FUND APRIL 1, 1898. \$625,000.00 SURPLUS OVER REINSURANCE. \$270,000.00

AMOUNT AT RISK. \$270,348.00 Losses paid during past year. \$36,024.48 Dividends paid during past year. \$72,493.25

GAIN IN SURPLUS DURING PAST YEAR. \$80,000.00

DR. T. A. BLAND, BOOK, How to Get Well, Is the best book DOCTOR BOOK OUT. Its advice is sound, sensible, safe. Dr. Miner said: "It is a charming book, which cannot fail to do vast good." Third edition, revised and improved. Price only \$1.00. For sale by MASS. PLOUGHMAN, 178 DEVONSHIRE ST., BOSTON.

SEPARATOR BARGAINS I have on hand and for sale a large number of SECOND HAND CREAM SEPARATORS Of various sizes and different makes. These machines are in first-class condition, having just come from the repair shop. P. O. BOX 856, Philadelphia, Pa.

THE NEW POTATO CULTURE. Second Revised Edition. By ELBERT S. CARMAN, editor of THE RURAL NEW-YORKER; originator of the Foremost of Potatoes—Rural New-Yorker No. 2. This book gives the result of 17 years' experiment work on the Rural Grounds. How to In-

crease the Crop without Corresponding Cost of Production. Manures and Fertilizers. The Soil. Depth of Planting. Seed Culture. The Rural Trench System. Varieties, etc. It is respectfully submitted that these experiments at the Rural Grounds have, directly and indirectly, thrown more light upon the various problems involved in successful potato culture than any other experiments which have been carried on in America. Price, cloth, 75 cents; paper, 40 cents; prepaid.

For Sale by Mass. Ploughman.



# MASSACHUSETTS PLOUGHMAN

BOSTON, JUNE 4, 1898.

Persons desiring a change in the address of their paper must state where the paper has been sent as well as the new direction.

A LAZY youth; old age of want.

A GOOD trade is an income for life.

ONE can travel farther on a good trade than on a free pass.

To understand his business, is a farmer's certificate for success.

A great deal of money is saved by buying in large quantities and for cash.

Do not plow up a single acre more than can be richly manured and well cultivated.

MUCH more chance for a man who thinks he knows nothing, than for the one who thinks he knows it all.

No harm if the girls do considerable light outdoor work, provided the men reciprocate by doing a share of the indoor drudgery.

Is there anything which can get more out of a square rod of land in proportion to the labor involved than a grape vine or fruit tree?

No agricultural paper or experiment station can lay down rules for farming. No method will fit every case. Each farmer must apply principles to his own farm. That is what his brains are for.

If the man who makes two blades of grass grow where one grew before is a public benefactor, it follows that the man who lets a good farm run down does a public injury. If all farm owners did likewise the nation would go to ruin.

CAMPBELL'S Early is a new grape which is becoming more and more popular in New England. The great need of this section has been a productive early grape which should also be of good quality and a good keeper. So far the new comes seems to fill the bill.

THERE is considerable interest manifest on the subject of wild and cultivated mushrooms. No brief article can describe even a few of the varieties so that they can be safely distinguished. The Department of Agriculture at Washington has issued a good free bulletin on the subject.

No; this country does not need the Philippines nor any other far off abode of Mongolians and mongrels. If Spain, or any other nation, will pay the cost of the war they might have the Philippines and welcome. The American policy says the New World for Americans; and the Old World for the nations thereof.

FARMERS who have no ensilage, find it pays them to grow stock feeds, despite the Pennsylvania experiments showing that an acre of beets costs nearly twice as much as an acre of corn and furnishes only half as much nutriment. Cows need juicy food and farmers who have no silo should grow a few beets and pumpkins.

SOME good advice was given English farmers by the late Mr. Gladstone. He told them they should raise more apples and less grain, since the price per barrel of each product was about the same in England. The idea applies equally to New England. To be sure, apples are cheap these years, but so is grain. What part of the farm retains so much more for the trouble than the orchard?

THE wholesale milk producer has certain special advantages. He can buy grain by the carload at bottom figures. He can use all the labor saving machinery for his crops and for handling his milk. He can grade up his herd to good advantage, and can afford to spend time to work up the best kind of a wholesale market for his product. In every way he has the advantage over the small milk farmer, unless the latter has a retail trade.

THE gospel of thorough cultivation is travelling around the world. An Australian expert writes: "I really believe that without cultivation our Indian corn crops would not have yielded more than thirty bushels per acre, but, with thorough cultivation, they have given an all-round yield of sixty bushels per acre. On our experimental field all the conditions as to manuring, seeding, soil, and situation were equal in every respect. The following are the results: Not cultivated yielded thirty-five bushels, twenty-two pounds; cultivated once yielded thirty-eight bushels, fifty pounds; twice, forty-one bushels, thirty-seven pounds; three times, sixty bushels, forty-one pounds; and four times, sixty-one bushels and forty-two pounds." Evidently the maxim, "sow the seed," is as effective 8,000 miles away as it is in New England.

**DEAFNESS CANNOT BE CURED** by local applications, as they cannot reach the diseased portion of the ear. There is only one way to cure deafness, and that is by constitutional remedies. Deafness is caused by an inflamed condition of the mucous lining of the Eustachian Tube. When this tube gets inflamed you have a rumbling sound or imperfect hearing, and when it is entirely closed Deafness is the result, and unless the inflammation can be taken out of this tube restored to its normal condition, hearing will be destroyed forever; nine cases out of ten are caused by catarrh, which is nothing but an inflamed condition of the mucous surfaces. We will give One Hundred Dollars for any case of Deafness (caused by catarrh) that cannot be cured by Hall's Catarrh Cure. Send for circulars, free.

F. J. CHENEY & Co., Toledo, O.

## CURRENT TOPICS.

A capture recently made by the St. Paul under Captain Sigbee was that of the British tramp steamer Restormel loaded with 2400 tons of the best Welsh coal, which was attempting to enter Santiago harbor. It is believed that the coal was intended for the enemy's fleet and had missed making connections with them previously.

Official information has at last been received confirming the rumors that the Spanish fleet was in Santiago harbor and would not be able to get out owing to the strong American blockade. This information removes all doubt as to the part that the Spanish fleet will play provided Cuba is invaded by the American forces, and advises indicate that the troops are gathered at Tampa all ready for an immediate move. General Shafter will be in command, with from 15,000 to 30,000 troops at his disposal, and the plan is supposed to be an attack both by land and naval forces. The squadron before Santiago will probably demolish the forts at the entrance of Santiago harbor and attack the squadron within. The next few days will probably see some important developments. The 2d Massachusetts and the 71st New York will doubtless be included in the forward movement of troops.

The Sixth Regiment of Massachusetts finds reasons which seem to its friends satisfactory for thinking itself to be the promptest militia regiment in the country, says Harper's Weekly. Colonel Woodward had anticipated Governor Wolcott's order which followed the President's call for volunteers, and it is stated that it took him no more than thirty minutes to raise and report a full regiment to the Governor. It was the Sixth, as will be remembered, that made the memorable march through Baltimore in 1861, and Captain Marshall, now of the regiment, was a sergeant in it at that time. Finally, the Sixth includes a Concord company, in which are many descendants of the Concord minute-men who were in the first fight of the Revolution, so that the regiment feels warranted in filing a claim to have been first in three wars. It may be disputed, yet no better claim to this particular distinction seems likely to be offered.

The account of the Oregon's trip from San Francisco to Key West, a distance of 14,900 sea miles, is an interesting one although it was not especially eventful. During the trip, the longest run in one day was 375 knots, the fastest single day's run ever made by a battleship. The greatest run without a stop was 4000 miles between San Francisco and Callao, a record which has never been made by a battleship before. On reaching Callao, the condition of the ship was so good that she could have gone another thousand miles without re-coaling. At Rio Janeiro those on board the Oregon first received the news of the declaration of war and while lying in that harbor, the ship dropped her immaculate white and was given the regulation war color of gray. So enthusiastic was her crew that the painting was finished in two and a half hours. When coaling at that port it is said that thirty dynamite bombs were discovered buried in the coal. Both at Rio Janeiro and Barbadoes the ship received enthusiastic receptions, the whole population turning out to see her. Between Rio and Bahia the crew had hard target practice with both large and small guns at a distance of 3500 yards and running to 1600. The guns were fired 200 times with only 47 misses. To avoid the enemy the crews were divided into quarter watches and all guns loaded for firing every night. During the entire trip the crew expected momentarily to meet the Spanish, and the decks were cleared for action many times. On her arrival at Key West the ship and crew were found in perfect condition, and was able to leave almost immediately to join the rest of the fleet. Not a single fireman gave out during the trip, notwithstanding the temperature of the fireroom was frequently 150 degrees.

The energy awakened by our early wars against England gave us the Erie Canal, the national pike, and the development of Western river navigation says the Review of Reviews. The Civil War gave us our great transcontinental railroads. The present war with Spain must, if its logic is heeded, give us a transatlantic ship canal. The Pacific is to be the theatre of great events and of a rapidly expanding commerce in the years to come. We need the Nicaragua Canal in order to give our Eastern seaboard a fair Oriental trade. We need it also for our trade with our own Pacific coast and with the western coast of South America. It is now evident, moreover, that we need the Nicaragua Canal as a defense measure. The naval situation in the West Indies last month showed how much might possibly have depended upon the prompt arrival of the Oregon, which has required some ten weeks to proceed by way of Cape Horn from San Francisco to Key West. On the other hand, the naval situation in the Philippines showed how, under certain contingencies, it might have been necessary to send a relief expedition to Admiral Dewey from the Atlantic coast. The United States Government could readily afford to take the financial risk of the Nicaragua Canal purely on grounds of public defense. The canal would properly pay its own way out of

the tolls upon commerce; but even if there were some annual deficiency to be met, it would be the most economical part of our annual naval bill. Thus far, the war has shown that we need a coaling station or two in the West Indies, that we need the Hawaiian Islands, and that we need the Nicaragua Canal as an out-and-out territorial possession of the United States. The canal ought to be built as a direct governmental undertaking, and ought to be cut through a strip of ground owned by the United States as absolutely as our Government owns the District of Columbia. No other plan will suffice.

There is so much confusion as to the distinction between a cruiser and a battleship, that we summarize from the New York Times the difference between the two classes of vessels, says an exchange. A battleship is primarily a vessel designed to bear the brunt of battle with the most powerful ships of an enemy's fleet. Hence, in a battleship great speed must be sacrificed, because the machinery necessary to operate the big guns, the complicated framework needed to give the vessel strength, and the thickness of her armor render it impossible to give her sufficiently large engines and coal capacity to produce the speed. Furthermore, a battleship, being so limited in her coal capacity, is not expected to make long cruises. Her business is to fight and not to run about. A cruiser, on the contrary, is expected to do a great deal of travelling. She makes long voyages and does duty on foreign stations in time of peace. In war she dashes up and down a coast watching for the enemy, or performs scouting duty ahead of a squadron. She must be able to carry coal enough for her long voyages, and she must have speed enough to run away from the enemy's battleships or to catch merchant vessels. Hence she sacrifices weight of battery and armor to speed. A protected cruiser is one which has a curved deck of steel over her engines and boilers, and has her coal bunkers arranged so that they give additional protection, two feet of coal being regarded as equal to an inch of armor. An armored cruiser is one which is further protected by light armor, not of sufficient bulk or weight to compel a sacrifice of speed. Our fleet's cruisers are the Columbia and Minneapolis, which can go from 22 to 23 knots an hour, but they have no armor and they carry only one eight-inch gun each and several smaller ones. The Massachusetts, which is a battleship, has nearly a foot and a half of Harveyized steel armor and carries four thirteen-inch, eight eight-inch and four six-inch guns in her main battery, but has a speed of only 16 knots an hour. The Maine was not a cruiser, because in her construction, speed and coal endurance were in a measure sacrificed to armor and battery.

## Literary Notes.

Included in the current issue of HARPER'S WEEKLY is a four-page illustrated supplement devoted to the life and career of the late Mr. Gladstone. The story of his achievements in statesmanship and literature is well told by Edward Cary, and anecdotes of the great commoner's private life give a personal flavor to the article. Such a paper is, in effect, a history of British thought and politics during the last fifty years, and the WEEKLY supplement is a noteworthy tribute of American journalism to the memory of Gladstone, the influence of whose personality and intellect was not confined by the Atlantic, but was distinctly felt by all the English-speaking world. The illustrations are of especial attractiveness, including several portraits of Gladstone, taken at different periods of his life, reproductions of contemporary pictures of incidents in his career, and other interesting pictures.

CASSELL'S MAGAZINE for June has a very bright and attractive cover in color, and the contents are quite as bright and breezy. CASSELL'S is always popular, and its management never fails to give the public thoroughly up-to-date and readable stories, articles and poems. The present number is certainly one of the best this year thus far. Among the contributions are stories by Max Pemberton, Stanley L. Wood, Headon Hill, Henry A. Herling and Edward H. Cooper. Other articles are: My Day on Circuit, by a practicing barrister; Under Water in a Submarine Boat, by A. H. Atteridge; Capitals at Play, by B. F. Robinson; and Is the End of the World Near? by John Monroe. There are likewise excellent poems; and the whole number is thoroughly illustrated and well edited. (New York: Cassell & Company, Limited, 7 and 9 West 18th Street.)

In order to answer the thousand-and-one questions the people are asking in these days about the Philippine Islands, the REVIEW of Reviews for June contains two valuable illustrated articles, one giving the observations of a very recent American visitor to the islands, Mr. Joseph T. Mannix, and the other by Mr. Charles Johnston, late of the Bengal Civil Service, on "The Philippines in History." The relatives and friends of the thousands of young American volunteers who will shortly be called to serve in that distant part of the world will be interested in what these writers have to tell about the islands and their inhabitants.

Admiral George Dewey, the hero of Manila, is the subject of a character sketch in the June REVIEW of REVIEWS by Winston Churchill. This is the only time that the life story of our modest Yankee admiral has been told in print with any completeness. His boyhood days in Vermont, his schooling at Annapolis, and his stirring experiences under Farragut in the Civil War, are all passed in review. Mr. Churchill is himself a graduate of the United States Naval Academy and the author of the very successful novel entitled "The Celebrity." He has had unusual facilities for getting information relative to Admiral Dewey's interesting career and antecedents.

The American edition of the QUIVER has a very interesting number for June, that will be enjoyed by Sunday readers everywhere. The QUIVER is well known as an illustrated magazine for Sunday and general reading. Among the contents of this number are: "Some May Meeting Celebrities," by F. M. Holmes; "Dr. Guthrie as I Knew Him," by Prof. W. G. Blake, D. D.; "The Clothes of Bible Times," by Sarah Wilson; "Spring Frolics and Yagades," by Frebruary Vernon. There are also complete stories by Christopher Here, E. S. Curry, and Roma White. [New York: Cassell & Company, Limited, 7 and 9 W. 18th St.]

## OLD GLORY SHOW YOUR COLORS

### Washington News.

Progressive farmers will find an instructive publication in the year-book of the Department of Agriculture which is just issuing, and the statement can be made without hesitation that it is the most interesting and useful annual report of that Department ever placed before the public. The work of the publication by the department of the results of its work, is of course highly important, the enabling act defining as among its chief duties "to gather and diffuse among the people of the United States useful information on subjects connected with agriculture in the most general and comprehensive sense of the word." Naturally, it is important that when useful experiments are completed and useful information gathered, the facts relating to them should be spread widely among those interested in the subjects, and this course entails on the department a vast amount of publication and distribution. The old reports of the Bureau of Agriculture were generally looked upon as dry, unpractical books, which however, members of Congress could distribute, with a few seeds to their farmer constituents, to show them that they were not forgotten, whether the report was ever opened or not, and they doubtless served this purpose well. But whatever may be said of the comparative dryness of the earlier publications of the Department this is far from the case at the present time. Its publications of these days are fully abreast of the times and treat exhaustively of every subject which is of interest to farmers and are the result of careful investigation and experiment by educated and practical men. I believe that the department, from its head down, is in about as close a touch with the farmers of the various sections of the country as it is possible to get. If there is any way of getting in any closer touch, Secretary Wilson wants to know it, and wants, as well, to hear any other practical suggestions from farmers.

DOES IT HELP THE FARMER? As an indication of what relation the Secretary thinks the Department should occupy to the farmer, he sent the following note to each division of his department in connection with the preparation of the 1897 year-book.

"It is my desire that in addition to such other suitable articles as may be necessary, the forthcoming year-book, 1897, should contain an article from each chief of bureau which shall set forth in plain terms the relation of the work of his bureau to the farmer. The existence of the Department is justified precisely so far as it aids the farmer to be a successful farmer, and my desire is that the article called for should present clearly to the reader just how the division of the work in your charge achieves that purpose." The result has been that the year book contains a brief sketch from each division of the practical work of that division and its direct relation to the farm, dairy and orchard, and what it does, which actually helps the farmer to grow better crops, and more of them, and to secure the best prices for them.

In addition to the individual reports, the year book contains various special articles prepared by men who are authorities on the subjects of which they treat and containing much really valuable information. The 1897 year book is a volume which every farmer in the country would do well to possess. In whatever branch of agriculture he may be engaged, he will find some subject treated in its pages, whose discussion will interest and benefit him in his work.

### OUR GROWING FOREIGN TRADE.

One of the most interesting features of the report is found in the statement of Mr. Hitchcock, chief of the Division of Foreign Markets, which shows the relations between the producers in the United States and the foreign markets of the world. He presents figures which show a great increase in our foreign trade during the past few years, and shows that it is constantly increasing; the increase is observed with alarm by the agrarian interests of those countries and various discriminating measures adopted to prevent or check it; he comments on the failure of our producers to study the wants of those markets and the great importance of our knowing their requirements; the importance generally of the foreign market as related to our home market, in that it is an overflow receptacle into which our surplus products can be directed, thus avoiding the flooding and breaking down of the home market; he discusses the need of special agents abroad and of agricultural attaches to the various legations, to make intelligent reports of the wants and conditions of the countries. No inconsiderable progress has been made in the past year in the widening of foreign markets to American products.

### MUSHROOMS; TOADSTOOLS.

One of the special articles of some interest to a good many people is on the subject of edible and poisonous mushrooms. Directions are given clearly and specifically how to distinguish the various kinds and numerous illustrations are given. The resemblance is very close between the common meadow mushroom, with which we all think we are familiar, and the deadly amanita. It would be well for people liking mushrooms to observe just what this difference is.

### DOMESTIC AND FOREIGN FRUITS.

Mr. W. A. Taylor, of the Division of Pomology, contributes an interesting and instructive article on the fruit industry and the extent to which domestic fruits have been substituted for foreign fruits. He has dug down pretty deep

into ancient American history, for he quotes John Smith and other early English settlers in their comments on the fruits originally found in America. The hero of Pocahontas early learned the difference between a ripe and a green Virginia persimmon and describes them as follows: Plums there are of three sorts; the red and white are like our hedge plums, and the others, which they call Puchamla, grow as high as Palmeto. The fruit is first green, then yellow, and red when it is ripe. If it be not ripe it will draw a man's mouth awrie with much torment, but when it is ripe, it is as delicious as an apricot. He also mentions chinquapins, cherries, crab-apples and grapes, of which last named the colonists made "nere twenty gallons of wine which was nere as good as your French British wine."

### CLOVERS AND COWPEAS.

Mr. Jared Smith contributes an article on the subject of legumes and green manuring, than which there are no subjects more important to the farmer, especially if his land be either thin or compact and clayey. The article shows clearly the great advantage of plowing under legumes of various kinds, rather than rye, buckwheat, etc.

### DAIRY TALK.

An article by Major Alvord on the utilization of the by-products of the dairy is worthy of the attention of many a farmer. The time has come when the American agriculturist must look to every detail, both in production and in waste on the farm else he will surely fall behind. Careless methods which obtained fifty years ago on the farm would not now stand the severe competition of improved methods, machinery and intelligent management, and it is necessary for the successful farmer to watch every item in the farm management. The foregoing mentioned are only a few of the subjects discussed in the yearbook. It contains many others and on a variety of subjects.

### A HOME COFFEE SUBSTITUTE.

Some little inquiry is being made as to the practicability of farmers growing their own chicory in case it is desired as a coffee substitute. There seems to be no doubt that farmers can grow, dry and roast chicory. The Department of Agriculture recommends the cultivation of the plant in the mid-northern belt of the country. Its cultivation, however, as a market crop should be undertaken only when a chicory mill, where the crop can be disposed of, is at hand. It is believed by the Department that the cultivation of the crop can be made a profitable industry, as something over sixteen million pounds were imported in 1896.

GUY E. MITCHELL.

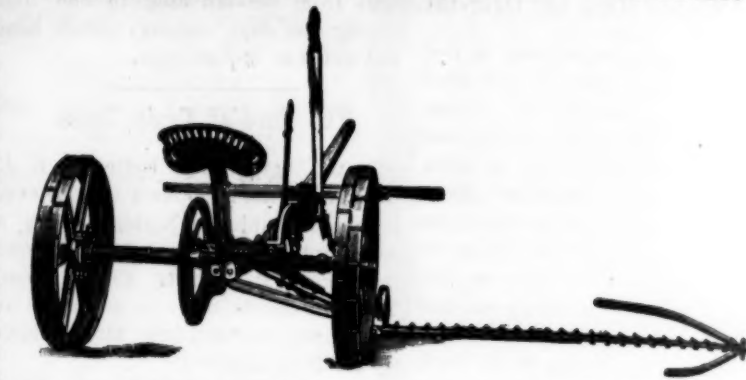
### Read and Run.

A great influx of gold is assured this year.  
—The Birmingham iron mills are full of orders.  
—A son of Brigham Young has failed for \$1,000,410.  
—Massachusetts has been called to furnish 3041 men.  
—Great possibilities of trade with the Canaries is shown.  
—The western wool growers are holding stocks for higher prices.  
—The government has expended one million dollars for army mules.  
—Henry M. Brooks, secretary of the Essex Institute, Salem, is dead.  
—The danger of a yellow fever outbreak this year now very slight.  
—European mediation seems impossible, even to leading Spanish statesmen.  
—The President has issued a proclamation calling for 75,000 more troops.  
—Jimenez, an alleged Spanish spy, is to be detained by the Government.  
—Forty Krupp guns have been sent from Germany to Spain as kitchen furniture.  
—It is estimated that war rates have already been written aggregating \$100,000,000.  
—The defeat of Admiral Cervera's fleet is expected to precipitate a revolution in Spain.  
—A plan is on foot to consolidate the sash, door and blind factories in five states.  
—The New York Commercial says the war demand for copper is exhausting the supply.  
—American reverses are alleged in stories sent out by the Spanish commander at Manila.  
—Ex-Secretary John Sherman and wife, now at Mansfield, O., have started for Sitka, Alaska.  
—A Cramp official admits that the company may build a shipyard for Russia at Port Arthur.  
—The Presbyterian General Assembly has decided to take no action in the Princeton Inn case.  
—Senator Stewart, of Nevada, has just published in book form, "Analysis of the Functions of Money."

—Indians shooting from ambush killed William Meehan, an old-time Yukoner, near Skaguay, Alaska.  
—The President has under advisement a project to seize the Caroline Islands on humanitarian grounds.  
—Havana's defenses are said to be very formidable and the Spanish army of 120,000 men very strong.  
—The American barque Sarenac, captured in the Philippines by a Spanish gunboat, has been released.

—The Union Works of San Francisco has sent an agent to Russia relative to contracts for Russian warships.  
—Negotiations for the settlement of all controversies between Canada and the United States have been begun.

## WORCESTER BUCKEYE MOWER



Will cut more GRASS for less MONEY than any other Mower on the Face of the Earth.

### Beware of Imitations.

Look for our TRADE MARK on all duplicate pieces. No others are Genuine.

## WORCESTER HORSE RAKE, "THE BEST RAKE IN THE WORLD."

Hickory Wheels, Steel Tires, Steel Axes, Sled Runner shape teeth, and Self Sharpening. SEND FOR CATALOGUE.

## BULLARD HAY TEDDER, "ALWAYS RELIABLE."

and up to date in improvements. SEND FOR CATALOGUE.

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**The Richardson Manuf'g Co.**  
WORCESTER, Mass.

JOSEPH BRECK & SONS, Corporation, 47 to 54 No. Market Street, Boston.  
Special New England Exhibitors, Agents and Handlers.

—Halifax is much excited by the reports of strange warships off the coast; the forts have been ordered manned.  
—English and Boston capital has secured \$5,000,000 worth of coal property in southern Kentucky and eastern Tennessee.  
—Savings bank deposits fell off for a short time on account of the war, but they have now resumed their usual conditions.  
—France is disturbed by the misguided attack of journalists on the United States and by fear of an Anglo-American alliance.  
—George M. Pullman's widow has renounced the will and accepts her right of dower, which enables her to provide for her sons.  
—Our trade with China has been shown to be one one-seventh of that empire's entire commerce, and second only to that of England.  
—John Manley and George Sistrer, fourteen-year-olds, have been arrested for placing ties so as to wreck a train near Flushing, L. I.

—A conference at Atlanta, Ga., after investigating the Southern negro problem, states that the excess of negro death rate as compared with whites is diminishing.  
—The Central Railroad of Georgia reports that the peach crop will be the greatest peach crop Georgia has ever known, even exceeding the great crop of 1895. Fort Valley, which is a little town in southwestern Georgia, will ship 800 carloads of peaches this year from 672,000 full-bearing trees, besides a quantity of plums and melons. Marshallville will ship 600 carloads of peaches and over 100 cars of plums. The Macon & Birmingham road expects to handle 300 carloads of peaches. Several hundred carloads will come over the Georgia Southern. Marshallville, like Fort Valley, a few years ago was nothing more than a railroad station with one or two stores and houses, as dreary and hopeless looking a place as could be found in the South, noted chiefly for chills and fever. It is now a busy, thriving town, with nearly a half million peach trees round it, and 52,000 plum trees, "exclusive of hundreds of trees in private orchards."

—The Enslin homestead in Ashland has been bought by Freeman W. Hood of Newton, who buys on private terms. There are about seventy five acres of land, with large frontage on the electric car line to Hopkinton. The buildings consist of an attractive, old style country house and two barns.  
—The old Howe farm, known as Pinehurst, situated south of the village of Boxford, on the main road leading to Topsfield, containing fifty acres, with a beautiful pine grove, a commodious old colonial house, large barn, stable and out buildings, has been sold to H. C. Holt of Melrose Highlands, who buys for a home and will make extensive improvements.

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WORCESTER, MASS.  
T. C. Mendenhall, President.  
Courses of study in Mechanical, Civil and Electrical Engineering, Chemistry and General Science. New and extensive laboratories in Engineering, Electricity, Physics and Chemistry. Special facilities in Steam and Hydraulics. 194-page Catalogue, showing positions filled by graduates, sent free.  
Address J. K. MARSHALL, Registrar.

## BASS POINT NAHANT.

Boston's Favorite Seashore Resort.  
Grand Inauguration of Season 1898  
May 29th and 30th.

**SPECIAL MUSICAL FEATURES**  
African's Naval Brigade Band.  
GRAND FISH DINNERS.  
Steamer LEAVE LINCOLN WHARF, Commercial Street.  
For Bass Point, 9:30 a.m., 12 noon, 2:20, 5:00 p.m.  
For Nahant, 9:30 a.m., 5:00, 7:20 p.m.  
Fare 25c. Children 15c. Take E. Boston Ferry cars at Atlantic Avenue Depot cars.  
A. F. LANE, N.E.A., 201 Washington St., Boston.  
T. G. Egan, General Manager.

## SURE DEATH TO BUGS.

(Safe to Use—No Arsenic—Sample Free.)  
Kills Potato, Squash and Cucumber Bugs, Cutworm and Tomato Worms, etc.  
**PREVENTS BLIGHT** on Potato Rust. Use freely on Vegetable and House Plants. More freely used, better plant will thrive. Applied dry, no water to wash off.  
1 lb. p'k'g. 12c; 3 lb. p'k'g. 35c; 5 lb. p'k'g. 50c; 10 lb. p'k'g. \$1.00.  
Pat. March 18th Nov. 8, 1897. Pat. In Canada Nov. 2, 1897. Perfection Shakers, etc. Rubber Atomizers, etc.  
For sale by all local dealers.

## DANFORTH CHEMICAL CO., 19 Spruce St., Leominster, Mass.

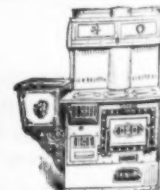
## Bargain in Shrubs.

We have here in Boston in cellars a large quantity of Trees, Shrubs, etc., all varieties, that must be sold at once or burned. Prices ridiculously low. Send list of what you can use to be priced.

WHITING NURSERY CO., Roxbury Dist., Boston, Mass.

## \$50.00 RANGE FOR \$25.00

TO INTRODUCE OUR TRIUMPH STEEL RANGE into every section of the United States, we will for a short time deliver at your depot free of charge our highest grade Steel Range for \$25.00. The regular retail price is \$50.00. It has 6 eight-inch flues. Top cooking surface is 30x34 inches. Oven 12 inches high, 17 inches wide and 21½ inches deep, and 15 gallon reservoir. Weight 400 lbs. Burns wood or coal. Write for Free Descriptive Pamphlet. Best Range made. WM. G. WILLARD, Manufacturer, 113 & 115 N. Second St., St. Louis, Mo.













## OUR HOMES.

## THE OLD FLAG.

BY H. C. BUNNER.

Of with your hat as the flag goes by!  
And let the heart have its say;  
You're not enough for a tear in your eye  
That you will not wipe away.

You're not enough for a thrill that goes  
To the very inmost of the soul;  
You're not just in your throat that rose  
To the very inmost of the soul.

Let us be men, and let us be true,  
And let us be men, and let us be true,  
And let us be men, and let us be true,  
And let us be men, and let us be true.

The man that bears it is bent and old,  
And his eyes are dim and gray,  
But look at his eye and young and bold,  
At the time that he hears them play.

The old time thunders through all the air,  
And strikes right in to the heart;  
And the old time thunders through all the air,  
And strikes right in to the heart.

Of with your hat as the flag goes by!  
And let the heart have its say;  
You're not enough for a tear in your eye  
That you will not wipe away.

## WAS IT PROVIDENCE?

## A True Story of the Civil War.

It was in September, 1862, just before that terrible slaughter known as the battle of Antietam. It was a time when the whole world looked on and held its breath. The counting armies of the North and the South were about to meet in a conflict that would go down in history as one of the great battles of the world. There are those who remember how the old "Iron Brigade" was led in its historic charge at Balaklava; how but a remnant remained of that devoted band of heroes; and that memory must be filled with horror as they recall the awful loss of precious lives.

One of the survivors of the "Iron Brigade" (I believe but seven answered the roll-call after the battle, when before it the brigade was almost complete, consisting of two regiments, the Sixth and Seventh Wisconsin Infantry) tells a more or less of the story of the battle of Antietam. It had been one of a skirmish line that had been deployed to the front, and they were at nightfall dangerously near the enemy's lines. But so well marshaled were they, and picked men, too, that no thought of fear entered their heads. They were alike steady in their movements and determined in their bearing. The night came on space, and very dark. The wind sighed and moaned among the trees. It was one of those nights when the very darkness seems uncanny! But no sound save the wind could be heard. Our skirmishers, knowing full well the importance of their mission, made their march in silence.

They were now traversing a ravine, and one of the party stopped suddenly, and immediately a halt was called. Up to the right, and scarcely fifty paces away, a sentry was plainly discernible. He stood on a rise of ground, and from where our men lay could be easily watched as his form showed plainly up against the dark sky. That he was a Confederate outpost sentry, no one could doubt. What was to be done was to be done quickly!

Hark! the moment was a supreme one. The man was singing softly, but still distinctly enough to be heard. What a strange thing to hear! It was an old familiar hymn, made precious to us by the thought of loved ones at home whom he could not see, and with whom he had often in days gone by sung the dear old song! It was Saturday night, and perhaps he was thinking how on the morrow those dear ones would be singing, and thinking of him in one of his songs. Though he was one of the boys in gray, and our boys were the blue, their hearts were touched with the pathos and tenderness of that refrain.

Gently and sweetly came the words, so distinctly tender. Our boys uncovered their heads; their breasts heaved with emotion!

They could have taken him prisoner; they could have shot him dead. Indeed, when first sighted, a carbine had been raised by an impetuous youth, ready to shoot the enemy where he stood, regardless of consequences. Instead he had taken them captive—entranced them as by a magic spell.

Tears flowed from eyes long inured to the sight of the hardships and heartlessness of grim war! And as the song continued, each knelt down then and there in reverence:

"All my trust on thee is stayed,  
In my hand no price I bring;  
Cover thy defenseless head,  
With the shadow of Thy wing."

The sentry paused, knelt for a moment with bowed head! That song had done its work—its mission was fulfilled—and as by one thought the singer was left unmolested, and our boys retraced their steps.

There were ten or twelve men in the party, and but four of them were left to answer the earthly roll-call after the battle of Antietam.

Years have sped by, and now comes to my eye a newspaper clipping giving the sequel to this strange incident of long ago.

On a trans-Atlantic steamer Sunday services were being held. All on board united in the singing in the cabin. One of the survivors of Antietam was present.

What was it that causes him to drop his book and look around full into the face of a worshipper behind him? Surely he had heard that voice before! But where?

As the slowly returning reason of the subject of mental derangement comes back, or consciousness to one awakened from nightmare, came the recollection. It filled him with joy and recol-

row intermingled. They were singing, "Jesus, Lover of My Soul!"

His voice broke; he could sing no more. Tears welled up in his eyes, and the strong man who had faced battles without flinching was unnerved. He dropped his head and memory took him back to that night before Antietam. He was sure that he was face to face again with that Confederate sentry who had sung that song so thrillingly on that eventful occasion. He could not be mistaken. There was a pathos in it too fervent to be lost to one who had heard the same voice before, even though some thirty-five years had elapsed since the never-to-be-forgotten night.

When the benediction had been pronounced, and after our friend had regained his usual composure, he sought out the owner of the voice, who was a typical Southern gentleman in appearance.

"I beg your pardon, sir," said he, by way of introduction, "but are you not from the South?"

"I am," was answered in a round mellow voice; "but you have me at an advantage, for I never recollect having seen you before."

"That may all be very true, sir; and I trust you will still further pardon me if my apparent curiosity seems rude to you, and I will soon explain my reasons."

"Proceed with your quizzing," said the stranger, good-naturedly, "for if I can be of service to you I am yours to command."

"Thank you," responded our friend. "Were you at the battle of Antietam, fighting in the Confederate lines?"

"I was, sir; and I am proud to be able to stand here and tell of it. Though we fought for a lost cause, we believed we were right, and that we had God on our side. The horrors of that terrible Antietam are still fresh in my memory, and as you have awakened in me that recollection of long ago, I now beg your pardon for appearing solicitous as to your object in asking me that question. Did you fight there, also; and were you a companion in arms?"

"Ah, no, my friend, I was not a companion in arms—I was on the other side. But I fought there, and that is why I came to ask you these questions. But if you will allow me to extend my inquisition a little further we may soon be able to call a truce, and can then recount the scenes of those gruesome and awful days of '62 and years following."

"I am still gladly at your service," gallantly responded the stranger, "and no doubt we will be mutually uplifted and entertained."

"Were you on sentry duty on that memorable Saturday night preceding the battle?"

"I was," he said, eagerly; "but still you speak in riddles."

"You know we have just been singing, 'Jesus, Lover of My Soul?' Did it recall any memories of the past to you?"

"Oh, yes!" he broke in fervently, and grasped our friend's hand in a vise-like grip. "But what do you know about it? Go on! Don't keep me in this suspense. Who are you, and how do you come to know so much of me and those days?"

He was terribly in earnest. His eyes moistened, and he nearly broke down. "Calm yourself, my friend. I can tell you in a few words all you seek to know. I heard you sing that dear old song that night, and I was with a party of skirmishers not fifty paces from where you stood. Our men were ready to capture you. One had even drawn a bead at your head. But something arrested us. We listened. You were singing the hymn which we have just joined in when I recognized that voice again. We were all deeply touched. We were rooted to the spot; and when you came to the lines:

"Cover my defenseless head,  
With the shadow of Thy wing,"

that carbine was lowered, and the petition had gone up to God—answered. You were saved!"

And the two battle-scarred veterans—one of the blue, the other of the gray—remained clasped in each other's arms, each thanking the good Lord for the saving power of that precious, grand old hymn—The Voice.

## TEMPERED.

BY SUSAN COOLIDGE.

When stern occasion calls for war,  
And the trumpet shrill and peal,  
Forges and anemones ring all day,  
With the tramp of steel.

The blades are heated in the flame,  
And cooled in icy food,  
And beaten hard, and beaten well,  
To make them firm and pliable.

Their edge and temper good;  
Then taught the stern discipline,  
They win the fight for fighting men.

When God's occasions call for men,  
His chosen souls He takes,  
In life's hot fire He tempers them,  
With tears He cools and shakes;

With tears He cools and shakes;  
He beats them to an edge,  
And tests and tries, again, again,  
Till the hard will is fused, and pain

Becomes high privilege;  
Then strong, and quickened through and through,  
They ready are His work to do.

Like an on-rushing, furious host,  
The tide of need and sin,  
Unless the blades are tempered be,  
They have no chance to win;

God trusts to no untested sword  
When He goes forth to war;  
Only the souls that, beaten long,  
On pain's great anvils, have grown strong.

His chosen weapons are,  
Ah, souls, on pain's great anvil laid,  
Remember this, nor be afraid!

—Congregationalist.

"When I was first married," says Dr. Lorimer, pastor of Tremont Temple, Boston, "I had my strict ideas about Sunday observance. Mrs. Lorimer had a colored 'nanny' for cook; and on the first Saturday after she came I went into the kitchen, and told her I did not want any Sunday work, so she could prepare all meals for that day before-hand. She didn't say a word while I was talking. Then she looked up, and pointing to the door, exclaimed, 'Now look hyar, Marse George, you jest go in dar and 'tend to your Christianity, and leave me 'tend to mah kitchen!' I went; and, as near as I can remember, she had hot dinners Sundays as long as she stayed with us.—New York Tribune.

## 'LIAKIM.

## "A Man of Low Degree."

BY TOM BURTON.

He was a typical Yankee, as "lean and hungry" looking as Cassius himself, and his face would have served for the typical phiz of Uncle Sam. He was never heard to laugh and rarely known to smile; but his good humor and kindly heart were known to every one, although at first he served as a butt for the fun of the entire regiment.

When he joined Antietam, as I remember, just after Antietam, 'Liakim's good nature was sometimes mistaken for stupidity; but after a time we came to know him better, and to have a proper respect for his stolid calmness, which we had found to cover a world of shrewdness and thoughtfulness. This latter quality was ever manifest, and showed itself in a thousand ways. When on the march, he was always ready to help a halting comrade by lightening his burden, no matter how heavy might be his own, for his rank form seemed to embody prodigious strength and marvelous reserve force; and many a time he was known to share his scanty rations with one still more poorly provided than himself.

He was never intoxicated, and never indulged in profanity; his only weakness (if such it should be called) being music, which was in his case evidenced by a propensity to lift his voice in song, and this upon all possible occasions.

And the only tunes to which he ever gave voice were those associated with the most dreary and doleful hymns of the olden time.

And then he would sometimes supplement his vocal performances by those of a quasi instrumental character; for he would cover his comb (for which indeed he seemed to have no other use) with a bit of paper and then, pressing this primitive instrument against his lips, he would evoke the most dismal sounds imaginable. And this he would persist in doing, utterly regardless of the invariable shower of shoes, canteens and whatever other missiles happened to be at hand, which greeted his every performance.

At first he was utterly green; and although fairly quick in learning the manual of arms, it seemed as though he would never acquire a knowledge of the various matters of military discipline and etiquette. And as an instance of this, it was told of him that one night upon his return from a foraging expedition he was challenged by a sentinel as he reached our lines. Forgetting all about the necessity for giving the countersign, he cried out in trembling tones, "Don't shoot! I'm 'Liakim Glass, with Captain Barker's support!"

He did not have much opportunity to distinguish himself in his first fight, which was little more than a skirmish; and after we returned to camp he was seen in front of his tent, his face very pale, although suspiciously red about the eyes, and wearing even a more doleful expression than usual.

"What's the matter, 'Liakim?" (this being his nickname, and which the boys insisted upon to be spelled "Liakim," "Don't shoot!" he shot. "I'm 'Liakim Glass, with Captain Barker's support!"

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Liar," and "Sister's mule" became one of the features of the camp.

The bitter winter was soon upon us and all through the hard days and harder nights "Sister Liar" became more and more endeared to the hearts of his comrades. No matter what the day's duty had been, nor how weary it had left him, he was always ready to watch with the sick or dying; and no woman's hand was more gentle than that of this raw-boned Yankee as he ministered to those in need.

Early in the spring there came one morning a fat budget of letters—the first for many days—and somewhat to our surprise one of them was for 'Liakim Glass. This was the more noticeable, for the reason that he had never seemed to expect one. Indeed, he had never been heard to mention the fact of possessing kith or kindred, save upon the occasion already mentioned, when he had expressed such a strong yearning for the shelter of "Dad's cow shed."

That the letter had brought him unwelcome news was quite manifest from his saddened eyes and subdued manner. But he said nothing, and no remark was made to him, except by little Abie Sinclair, who had a positive genius for always saying the wrong thing at the wrong time. And so, one morning, just after inspection, while a few of us were talking together, he turned to 'Liakim, and said, in a jocular manner, "I say, 'Sister Liar,' what's come over you since you got that letter the other day, did it bring you news that your sweetheart had gone back on you, or that she was only dead?"

And then was manifested the first indication of anger we had ever beheld in our comrade. His blue eyes seemed to flash fire, and he astonished us by the fierceness with which he turned upon his questioner, frightening the latter so that he backed away in startled apprehension, thereby tumbling himself into an empty flour barrel that happened to be standing ready to receive his diminutive form. This mishap, while it saved him from the effects of the other man's anger, placed him in a very absurd and undignified position, as it shut him up like the traditional jackknife, his body disappearing from sight, and his feet and head being forced into that most uncomfortable proximity to each other.

And there he remained, struggling violently to extricate himself, and swearing at us for laughing at him, instead of helping him to regain a more natural position.

'Liakim had paid him no further attention, but with his face whiter than we had ever before seen it, had turned and walked slowly to his own tent, and we saw little more of him that day.

The next morning he seemed much like his former self, as to complexion and general appearance, but that was all; for he was never again the same light-hearted fellow as before. He was, if anything, more kind and thoughtful than ever, when occasion required; but there was a subdued sadness about him that was almost pitiable, bespeaking as it did mental suffering of the keenest sort. We all felt sorry for him, and would have been glad if he had given us a chance to pass our opinion upon his trouble, and so have the satisfaction of trying to console him. But he was silent, and so the days passed, and 'Liakim went his way, mute and patient, performing all his duties as usual; but we remembered afterwards that he sang no more hymns, nor elicited his peculiar style of music from his self-made instrument of melody.

And then in the early summer, there was another skirmish at the front, and 'Liakim was brought in, badly wounded, a rifle ball had passed through his chest; and at the first opportunity, that same day, I went to the hospital—a collection of rude huts in the woods—to see him.

He was stretched upon a cot, with a blanket defining his long, gaunt figure, which now seemed more attenuated than ever; and as I approached, a red ray from the setting sun found its way through the open door, and lay like a bar of gold upon his ghastly face.

He recognized me at once, and a welcoming light came into his fading eyes, and joined the smile that struggled to his white lips. He was unable to speak; and thus he remained, holding my hand, until the early morning, when the end came, and poor 'Liakim was summoned to the final roll-call.

His blouse lay near by, and as I picked up to place it over his dead face, I chanced to take hold of it in such a way that something fell from an inside pocket. It was a picture, and a letter, and without doubt the letter which had wrought such a change in our comrade. I picked them up, and was about to replace them, when some impulse caused me to look at the picture. It was a crude country-made photograph, and showed a big-eyed, saucy-faced girl, her small nose decidedly "tip-tilted," and her mouth smiling in a way that bespoke no great strength of character, as she gazed out at me in the dim light.

Under the picture, in 'Liakim's sprawling, illy-formed characters, was: "Hetty, Marvin's Wood, June 5, 1860."

A scrap of newspaper had fallen from the envelope, and lay upon one of the dead man's hands; it was the announcement of the marriage of Mehitabel Harvey to one John Raymond.

Poor "Sister Liar," the secret of his heartache was now in my possession, and there it remained; for I placed the picture and clipping in the envelope which contained the letter, and slipped them in over his heart, buttoning his coat securely over them, for greater safety.

And there they rested when, that same morning, we laid him away, rolled in his own blanket, as well as in two others contributed by his comrades. And as we turned away from his grave, a broad bar of yellow sunshine shot through the pines and lay across it, just as the setting sun had glorified his face the evening before.

And there he rests—poor "Sister Liar," good-natured, tender-hearted old 'Liakim. He was not a hero, but simply an every-day, commonplace man; and yet his life carries with it a lesson which we, his old comrades, will never forget. For he lies there under the pine trees,—

"A living image to the ages, as they pass,  
That simple duty hath no place for fear."

## A BANTAM IN THE ARMY.

Major Tom Williams owned the only rooster that has been honored in Georgia by having a tombstone over his grave.

"While we were camped near Culpepper Court House in the fall of 1862," he says, in telling the story, "I became acquainted with a family named Dowdy. Just before the battle of Culpepper I paid a visit to the farm and found the ladies in a panic preparing to flee. They set before me such scant fare as they had left, and after I had eaten a hasty luncheon Miss Mary Dowdy called to me and led the way to the back yard.

"There is the last of our stock of poultry," she said, pointing to a little bantam cock that was strutting about the yard. "I haven't the heart to kill him because he is a pet. If you want him you can take him to do as you like with him."

"During the campaign of 1863 he often sat on my shoulder through the long, weary marches and hurried retreats, and I shared my rations with him. One night we had reached the flank of the enemy's camp by a forced march and lay down to sleep on our arms, expecting to be roused at the break of day for a sudden charge. I had started off with General perched upon my musket barrel, and a sudden change in the order of march had separated us from the wagons, so I placed the rooster on the limb of a sapling above my head while I lay down to snatch a few minutes' sleep preparatory to the surprise planned at daybreak.

"General did not utter a single cluck in protest, although he must have been very hungry from long fasting, but quietly squatted on the branch while I flung myself on the grass and leaves and was soon fast asleep. I was so weary that I slept profoundly until I was suddenly aroused by an unearthly screech in my ear. Raising my head, I took in the whole situation at a glance.

"General had dropped down from his perch and uttered a shrill crow right in my ear which had awakened me, and as I opened my eyes I saw the flash of guns as our pickets fired, and in an instant fell back upon us where we lay. The Yankees had turned the tables upon us, and discovering our presence, the surprising force became the surprised, and in ten minutes there was no more earthly racket going on in that pine thicket that you can imagine.

"Right and left of my position the boys came out of cover and advanced with yells and cheers, moving cautiously and firing as they moved. It had become sufficiently light for me to find my few belongings, and I soon discovered my hat and haversack, which I had forgotten to pick up in the hurry of the first surprise, and just at that time I was saluted with a loud crow just above my head, and looking up I saw General perched upon his limb, he had flown back there when the firing began, and with his head laid on one side he was sliding along the swaying branch cawing and clucking as big as if he had taken part in the fight.

"In spite of the banging of the guns and whistling of bullets, General stuck bravely to his perch and never fluttered during the entire engagement. When I told the story in camp that night General was the toast of the evening, and he was treated to all sorts of tidbits from the haversacks of my comrades in recognition of his gallantry on the field of action.

"One morning, however, General played the camp detective in a most alarming manner, which came near proving disastrous to a fellow-soldier of another mess. All foraging had been strictly forbidden and no man was allowed to leave the ranks under the heaviest penalty of military discipline. There was a fellow by the name of Jim Nesmith, who occupied a tent not far from that of the captain of our company. About four o'clock the order was passed along the line for us to prepare for a march. We had not been allowed to kindle our campfires the night before, so that our breakfast consisted of bits of hardtack and such other scraps of food as had been left in our haversacks.

"General was perched on a limb of a bush near me while I sat munching my hardtack, and all of a sudden he raised himself on his perch and crowed lustily. Of course, no cock in hearing could resist replying to such a challenge, and from within the tent occupied by Jim Nesmith came the muffled crow of an old rooster. Jim made a grab at the bug and succeeded in choking him off, but the noise had reached the ears of some of the others, and the captain became apprised of the fact that Jim had been foraging. A hasty examination of his tent disclosed the body of the big rooster choked to death by Jim in his picture to put a stop to his untimely crowing.

"Jim was ordered under arrest pending an investigation, but just about that time the order came to advance and we moved forward, and by sunrise we were fighting, and the unfortunate officer who had ordered Jim to be placed under arrest was borne from the field a corpse after the fight was over. The affair was forgotten amid the stirring scenes that followed.

"Seeing that the end was near, I found an opportunity to send General to the rear, and placing him in a cage, started him on a long journey to the home of a nephew in Georgia. He had not been long on the farm before he began to pine and droop, and the family thought that he was disconsolate on account of being separated from his comrades. This might have been all fancy, but he lived only a short time, and when he died my nephew and the boys of the neighborhood gave him a regular military funeral.

"I suppose that this is the only grave of a rooster in Georgia. The tiny stones that mark his last resting place can be seen on the old homestead near Dalton today. On the headstone is rudely carved the name 'General,' with the date of his death and the names of some of the most important engagements.

through which he passed during our comradeship among the battlefields of Virginia.—New York Sun.

## Gems From Gladstone.

The most distinguished professional men bear witness with an overwhelming authority, in favor of a course of education in which to train the mind shall be the first object, and to stock it the second.

Man himself is the crowning wonder of creation; the study of his nature is the noblest study that the world affords; and to his advancement all undertakings, all professions, all arts, all knowledge, all institutions are subordinate, as means and instruments to their end.

The true way to imitate the wisdom of the olden times is this; to watch the conditions of the age in which we live; to accept them thankfully and freely, as at once the laws of Providence for our guidance, and the gift for our encouragement; and when we learn by experience that the tools with which other generations wrought are not suited for the work that is given us to do, then to find if we can, some other tools which are.

Our life may be food to us, or may, if we will have it so, be poison; but one or the other it must be. Every day when it yields to darkness, and every night when it passes into dawn, bears with it its own tale of the results which it has silently wrought upon each of us, for evil or for good. The day of diligence, duty and devotion leaves it richer than found us; richer sometimes, and even commonly, in our character; richer always in ourselves. But the day of aimless lethargy, the day of passion and rebellious disorder, or of a merely selfish and perverse activity as surely leaves us poorer at its close than we were at its beginning.

## FARMS FOR SALE

**90-ACRE FARM** 2 miles to village, 1 to station and post-office; overlooks large pond; 20 acres mowing, balance pasture and woodland; 200 cords wood. 12 rooms, 2 1/2 baths, 1000 sq. ft. of porches, 2-story house, 2-story barn, 2-story carriage house, 2-story cow house, 2-story stable, 2-story granary, 2-story silo, 2-story hayrack, 2-story corncrib, 2-story apple house, 2-story pear house, 2-story cherry house, 2-story plum house, 2-story strawberry house, 2-story raspberry house, 2-story blackberry house, 2-story currant house, 2-story gooseberry house, 2-story huckleberry house, 2-story elderberry house, 2-story sassafras house, 2-story spice house, 2-story herb house, 2-story flower house, 2-story vegetable house, 2-story fruit house, 2-story nut house, 2-story seed house, 2-story oil house, 2-story vinegar house, 2-story honey house, 2-story wax house, 2-story resin house,





## THE HORSE.

## Prompt Treatment of Disease.

Prompt action for relief, by the proper diagnosis of disease and giving suitable remedies, should be considered as important in the case of afflicted domestic animals as of human beings. It is cruel to allow an animal to suffer for days without making an effort to give relief. A case recently occurred where a valuable horse had been suffering for six weeks. The owner was informed by the blacksmith the animal had "kidney trouble." Without the advice of a veterinary surgeon "some medicine" was given. The horse continued to grow worse. Finally a veterinary was sought, but it was too late and the horse soon died. A post mortem made by the veterinarian revealed the fact that the horse's death was caused by a triple strangulation of the bowels. The doctor had previously made a diagnosis, giving his opinion that what the post mortem showed was the trouble, and claiming that if he had been called at first there was a bare possibility that the horse might have been saved, for he would have administered medicine that would have set up action of the bowels, which doubtless was partially suspended on the first attack. It was considered something very remarkable that the horse could live six weeks with his bowels in such an abnormal condition, and the suffering must have been intense.—Baltimore Sun.

## Horse Notes.

George B. Inches of Edgewood Farm, North Grafton, Mass., has sent Elsiebeth, 2.27 1-4, and Chetto, 2.21, to the Readville track, in charge of trainer John Quinn, who will drive for the farm this season.

Allen Lowe is at Readville, Mass., with twelve horses. Those with records are Seylex, 2.15 3-4; J. T., 2.21 1-4; Gretchen, 2.24 1-4; Hamilton, 2.29 1-4; Lonach, 2.34 1-4, and two green pacers that can show 2.20.

Gen. B. F. Tracy has sold his well known stallion, Captain Walkridge, 2.18 1-4, to a titled Russian horseman for shipment abroad. He will be campaigned in Russia this season, and then retired to the stud. He is a fine looking fellow, eight years old, by Arabces, by Aleyone, dam Ruth Medium.

The farmer can make more money out of one good mare than he can make out of half a dozen scrub mares. If he can make such exchanges or purchases as will enable him to have good brood mares as the work stock of the farm he can make them pay a good income. Of course he cannot do this if he does not breed them judiciously or if he does not take the right kind of care of the dam and the colt. Almost any one now can find a good stallion, and it will pay well to go long ways, if necessary, to reach the best. The best sires should always be kept because of the value of the infused blood of the wisely selected sire—and there should ever be a persistent effort to improve with each generation. Unless the mare is exceptionally good the process of building up is not a rapid one, but with each new generation there can be a very marked advance. Of course in selecting the stallion individual excellence as to form, style, action, constitution, disposition and performance should be considered quite as carefully as pedigree. In pedigree look for performers along the line of ancestry upon both sides. A line of ancestry in which there are many individuals that have won distinction is one of good promise. The excellencies that are shown to have been often transmitted are likely to remain inheritable traits of the family. The Texas Stock and Farm Journal advises the farmer-breeders to start with mares whose blood lines can be traced back through many generations rich in distinguished performance if this were practicable. This few can do, but very many can breed to sires of illustrious ancestry and of demonstrated prepotent quality, the quality of transmitting to their progeny in marked degree the characteristics that are valued high in the more discriminating market of today, and remember that the market is becoming ever more discriminating, and the breeder who ignores its demands had better raise mules. The days when scrub horses had a value equal to the cost of raising them have passed.—Farm, Field and Fireside.

Treat your horse well and he will treat you well. Give him a bed of German Peat Moss. C. B. Barrett, 46 North Market street, Boston, Mass.

## The Weather Bureau's Weekly Crop Bulletin.

FOR WEEK ENDING MONDAY MAY 30, 1898.

OFFICE OF THE UNITED STATES WEATHER BUREAU, BOSTON, MASS., MAY 31, 1898.

**Weather Conditions.**—The weather during the week ending May 30th has been cloudy throughout the district, and, with the exception of the eastern counties of Maine and some of the northern sections of Vermont much rain has fallen. In the northern half of the district rain fell in moderate to heavy amounts for from three to five days, the fair weather having been in the beginning of the week; in the remaining portion it fell for from five to seven days, and generally in large amounts. Excepting a small portion of eastern Maine, there was practically no sunshine; what little there was occurred during the first days of the week. At Boston the total sunshine during the week was less than four hours.

Owing to the overcast skies, the easterly winds and continuous rain the temperature has been nearly stationary, and with low range for the season.

The rainfall during the week as recorded at the several stations of the Weather Bureau is as follows: Boston, 3.28 inches; Northfield, Vt., 0.46; Portland, 1.13; Nantucket, 1.39; Albany, 1.88 inches.

**General Situation.**—In eastern Maine and northern sections of Vermont the week is classed as fine, and farm pursuits of all kinds were carried along with much success. The moderate rains relieved the slight drought of the preceding week, and now that the crops are mostly planted, and some sufficiently advanced for cultivation, all that is needed for rapid advancement is warm sunshine. But for the remaining portion of the district, where the skies were nearly wholly obscured, and with rain for from five to seven days, the conditions were reversed. Vegetation has made good growth, so have we. With the soil too wet for cultivation farm work has been practically at a standstill. In southern parts of Vermont and New Hampshire, and the states to the southward of these the ground is reported very wet. In lowlands the soil is supersaturated. Some correspondents report fear of rotting and drowning of seed sown. In many highlands the heavy rain has done no damage beyond delaying farm work, growing crops having advanced rapidly with the warm rains. For the greater portion of New England the week is considered as lost to the agriculturist.

**Grass.**—There are no exceptions to a promising hay crop. The least promising sections report "good as average," but from about all sections the reports are "grass never better." Some are of the opinion that the growth has been too rapid and that the grass lacks substance. Expressions to this effect come from the writers in Worcester Co., Mass., and Fairfield Co., Conn. Many are confident that an abundant hay crop is assured, of excellent quality; all that is needed is suitable weather for harvesting.

**Grains.**—Much corn remains to be planted in Maine, New Hampshire and Vermont. In some southern parts of these states corn is up and doing well. The major portion of this crop is planted in the remaining states, but it is believed that much replanting will be necessary. Oats are looking well in New Hampshire. Early sown grain is belated by cool and wet weather in Essex Co., Mass. It is making rapid growth and is now promising in Hampden and Berkshire counties of the same state. In Connecticut oats and rye are good, the latter headed in sections of Fairfield Co. Considered as a whole the outlook is fully up to the average.

**Fruit.**—The outlook for an abundance of fruit continues promising in all sections. Wild berries are blooming bountifully. Caterpillars are making havoc in a few instances in Maine. They have also appeared in Vermont and New Hampshire. Forest worms have also appeared in large numbers in these states, but the damage to date is mostly to maples.

**Garden Truck.**—As a rule it has done well, but the weeds are doing harm; the soil has been too wet for hoeing except in Maine where gardens are reported excellent. In some sections of the state the peas begin to have runners. Strawberries and other garden fruit are in promising conditions.

**Tobacco.**—Little is reported regarding this crop, but the general backwardness is noted, due to cool and wet weather. Reports from Fairfield Co., Conn., indicate much complaint of loss

## Oriental Bamboo Piazza Curtains

Third Floor. Direct from Japan, sizes and prices as follows:

4-foot width, 8-foot drop	50c
6-foot width, 8-foot drop	75c
8-foot width, 8-foot drop	1.00
10-foot width, 8-foot drop	1.25
12-foot width, 8-foot drop	1.50
10-foot width, 10-foot drop	1.75

All complete, fitted with cords and pulleys, made of the outside bamboo, with natural design or finish, positively will not discolor, and should last at least 5 years. To be sold at price of cheaper grade. Bring your width of piazza only as length can be adjusted.

Japanese Lawn or Piazza Seats 10c

JORDAN, MARSH &amp; CO.

of plants on account of the wet weather.

**Vegetables.**—So far as can be ascertained at this stage of the season the vegetable crop is promising a bountiful yield. Early potatoes just coming up in Maine and some of the northern sections. In southern fields they are being cultivated. No report of damage by insects as yet.

S. W. SMITH.

Section Director, Boston, Mass.

## What Can Women Do in This War?

Our individual opinions concerning the present war are diverse—some regarding it as righteous, and in the interest of humanity, and others believing it unnecessary, and the outcome of "jingo politics" and "yellow journalism." But we are all of one mind, when it comes to the care of our citizen soldiers, mostly young men who have volunteered to render the country military service. Our thoughts follow them with tenderness, and we aim to keep in touch with them, whether their duty takes them to tented field, or the battlefield. When well, if they are in the care of faithful and competent officers, the Government provides for them, and they are in the main well cared for. But when they are sick—and already they have been overtaken by sickness and death, while en route to the seat of war—then we cannot be absolved from our duty to aid them in every possible way.

The Governor of Massachusetts, mindful of the well-known fact that climatic and camp diseases are more fatal to armies than the battle-field, four deaths from the former occurring to one from the latter, has promptly appointed a "Volunteer Aid Association," to serve as a Sanitary or Relief Committee for the state. It is composed of ten well-known men, who will receive and disburse the funds of hospital supplies, contributed from all parts of the state, for the relief of sick and wounded men of the army and navy. A large meeting of women, representing over one hundred different organizations, which convened to the State House, May 19th, agreed to work with the Volunteer Aid Association, and to collect and forward money and supplies as rapidly as possible.

Among these were the Massachusetts and the New England Woman Suffrage Associations, whose headquarters are at 3 Park Street, Boston. At a brief conference of the general officers, it was decided to co-operate heartily with the Volunteer Aid Association, and to appeal to our friends and co-workers everywhere, in the city and the isolated rural community, to men, women and even children, to commence without delay the collection of funds and hospital supplies. To postpone this work until the hospitals are filled with sick men, and battles have been fought, will be a great mistake. Already a requisition has been received from Fort Warren for hospital sheets and pillow slips, bandages and worn cotton cloth, for dressing wounds. The Volunteer Aid Association, Commonwealth Building, 11 Mt. Vernon Street, Boston, asks the gift of one dollar from all who can afford it. But the smallest sums will be acceptable, and even the dimes, nickels and pennies of the children. Send to us whatever small sums or large sums you can collect or give, and we will send you a receipt for it from the Volunteer Aid Association.

What are hospital supplies? They are hospital shirts and drawers, the former made without bosoms, like night-shirts. They may be of various sizes and lengths, to accommodate men ranging in height from five feet six, to five feet ten. If you have any to spare from your own households, partly worn, they will be very serviceable. Hospital sheets and pillow-slips for single beds, bed-ticks and pillow-ticks, to be filled with hay or straw at the front, cotton and woolen socks, towels, dressing-gowns, handkerchiefs, fans, sponges, and pocket combs. Any quantity of bandages will be needed. They must be from two and a half to four inches wide, and about five yards long, tightly and evenly rolled, and securely fastened, that they may not become loose. Use unbleached cotton, if you make them of new cloth, and partly worn

cotton if it is bleached. Flannel bandages are often needed, especially for abdominal use, and then they should be wide and cut on the bias. Old sheets, old table-cloths, napkins and towels, and old white rags generally, are needed by the surgeons for dressing. Send them on, folded smoothly, that they may pack well.

Send nothing perishable—no fruit, jellies, condensed milk, canned fruits or meats. Any quantity of these articles will be forwarded by the Volunteer Aid Association. They will purchase them with the money donated, and the dealers will pack them so that they can be forwarded without breakage, as they cannot be if packed with clothing. At this time we solicit only hospital clothing and articles made of dry goods, with donations of money, and for these we appeal most earnestly. We will receive at our rooms, 3 Park Street, whatever you may send, and carefully pack it, and as soon as a box is filled will transfer it to the Aid Association. Send your articles by express, prepaid, or if not too bulky, by mail. Notify me by mail whenever you express us a package, and its receipt will be acknowledged to you immediately. The same with gifts of money.

If we should be so blessed as to have a short war, as many predict, and the hospital supplies should not be called for, they will be valuable to the hospitals at home whether in city or town, and would in no wise be wasted. But there was the same talk of a "short war" in 1861, and the same confidence in the all-conquering power of our northern armies, and the same certainty that there was to be no war, "only a ninety-days' flurry." And yet the war lasted four years, nearly two million men from the North were recruited into the Union army, and from the Chicago Branch of the Sanitary Commission, one of ten organized in the great cities, there were packed and shipped to the hospitals and battle-fields 7,660 boxes of sanitary supplies, whose cash value was \$1,056,192.16. God grant it may be a short war! But let us hasten to be prepared to minister to the brave men now at the front, and on the way thither, if the war is protracted—as it may be. Send on supplies with haste and liberality.—Mary A. Livermore in the Woman's Journal.

## BITS OF FUN.

"No, I never take the newspapers home; I've a family of grown-up daughters, you know." "Papers too full of crime, eh?" "No, too full of bargains."—Tit-Bits.

Burgin: "I see the scientists claim that strawberries are ninety-one per cent water." Ralston: "The scientists are away off. Strawberries are ninety-one per cent box bottom."—Chicago News.

"The man who owns the farm next to mine is the luckiest fellow I ever saw." "What are you talking about? There's no such thing as luck." "There isn't, hey? Then will you tell me how it happened that he bored for water and struck oil, while I bored for oil and struck water."—Detroit Free Press.

Papa: "Well, did the photographer succeed in making the baby look pleasant?" "Mamma: No; the baby succeeded in making the photographer look unpleasant."—Puck.

"I hope, papa," said Bobbie, "that the Government isn't buying its torpedoes of Mr. Spillkins down in the village. I got some there last Fourth of July, and half of them wouldn't go off."—Harper's Bazar.

## "Goshen" Tanks

represent honest tank value and these are the reasons why: They are made of the best heavy galvanized steel, they are completely waterproof, they are built on a strong, well braced, heavy iron frame, they are built on a strong, well braced, heavy iron frame, they are built on a strong, well braced, heavy iron frame.

**Anti-Septic**—There is no place for disease germs in these tanks. Pure water makes good milk and butter, prevents many diseases, long cholera, etc. Don't buy until you get our anti-septic catalogue, sent for 10c stamp.

Kelly Foundry and Mach. Co. 92 Pearl St., Goshen, Ind.

## Veterinary Column.

J. F. H., Cambridge, Mass.—A sprain such as you describe is not incurable. Use Tuttle's Elixir.

Horseman, Elgin, Ill.—There is only one sure way of escaping lameness. Apply Tuttle's Elixir, and it will remain moist on the part affected.

Mrs. F. S. T., Richmond, Va.—If you find a case of colic that Tuttle's Elixir will not cure, it will entitle you to the \$500 reward offered by Dr. Tuttle.

Willard S. Davis, M.D., Alton, N. H., writes: "To whom it may concern:—This certifies that my horse, on the twentieth day of January, 1898, ran away with a hitching post and injured her knees so badly that she was pronounced worthless by several horse doctors. I tried various remedies for six weeks and she grew worse. At length used Tuttle's Elixir, and in three weeks from the time I commenced to use it I had her out the road ready for work. The knees healed so nicely that it is difficult to find the scars."

**Tuttle's Elixir** will do all we claim for it, or we will refund your money. It will cure all forms of lameness, colic, sprains, cockle joints, etc. Send to us for full particulars, MAILED FREE.

Tuttle's Family Elixir cures Rheumatism, Sprains, Bruises, Pains, etc. Samples of either Elixir free for three-cent stamps for postage. Fifty cents buys either Elixir of any drug-gist, or it will be sent direct on receipt of price. DR. S. A. TUTTLE, 27 Beverly Street, Boston, Mass.

"How can I get an article in your paper?" asked a correspondent of a Western Journal. "It all depends on the article you want to get into our paper," replied the editor. "If the article is small in bulk, like a hair-brush or tea-caddy, spread the paper out upon the floor, and placing the article in the centre, wrap it up by carefully folding the edges over it and tie it with a string. This will keep the article from slipping out of the paper. If, on the other hand, the article is an English bathtub or a clothes-horse, you would be better not try it at all."—Harper's Bazar.

Bean vines are especially valuable for sheep, being rich in nitrogenous substances, and these animals take to them quite readily. Plant the pole varieties in the corn rows, and cut them early or the silo.—Ex.

**RADWAY'S READY RELIEF**

CURES AND PREVENTS Colds, Coughs, Sore Throat, Influenza, Bronchitis, Pneumonia, Swelling of the Joints, Lumbago, Inflammation, RHEUMATISM, NEURALGIA, Frostbites, Chilblains, Headache, Toothache, Asthma, DIFFICULT BREATHING.

CURES THE WORST PAINS in from one to twenty minutes. NOT ONE HOUR after reading this advertisement need any one SUFFER WITH PAIN.

Radway's Ready Relief is a Sure Cure for Every Pain, Sprains, Bruises, Pains in the Back, Chest or Limbs. It was the First and is the Only PAIN REMEDY That instantly stops the most excruciating pains, allays inflammation, and cures Congestions whether of the Lungs, Stomach, Bowels or other glands or organs, by one application. WHEN USED INTERNALLY—A half to a teaspoonful in half a tumbler of water will in a few minutes cure Cramps, Spasms, Stomach, Heartburn, Nervousness, Sleeplessness, Sick Headache, Diarrhoea, Dysentery, Colic, Flatulency and all internal pains.

Fifty cents per bottle. Sold by Druggists.

RADWAY &amp; CO., NEW YORK.

BE SURE TO GET RADWAY'S.

**FARMERS**—To make money by selling and using FARMERS' HOLDFAST Corn Bladders, and every other kind of farm goods, call on us. We have a large stock of all the best farm goods, and we will sell you at a low price. We will also give you a sample of our FARMERS' HOLDFAST Corn Bladder, and you will see that it is the best. We will also give you a sample of our FARMERS' HOLDFAST Corn Bladder, and you will see that it is the best. We will also give you a sample of our FARMERS' HOLDFAST Corn Bladder, and you will see that it is the best.

## SPANISH BRUTALITY

Has been Compared to Employing the Knife on Cancers and Tumors.

DR. JAMES M. SOLOMON, 24 BEACON STREET, DOES NOT USE IT.

MRS. ANNIE E. REMICK, 16 Hartford Ave., Olneyville, R. I., Dec. 27, 1897. I have been treated by Dr. Solomon for fibroid tumor, and am now well. The trouble commenced about six years ago and gradually grew worse, until the spring of 1896, when I had a severe sick spell. At that time my health became reduced. I was unable to attend to my household duties, felt languid and sick, full of pains, and at times great distress, and could hardly move. I consulted two doctors, but received no lasting benefit or help from them, and was told by one of them that my only relief could be gotten through the use of the knife. Accordingly, in June, 1896, I went to the hospital, the knife was used, and a large malignant tumor removed, but it was found that my intestines were honeycombed by a cancerous substance. They discharged me from the hospital as incurable, said "that I might live six months, but not over a year." I felt much depressed and for nine months I struggled on for life, when some of my friends advised me to consult Dr. Solomon. My first visit to him was in June, 1897. He pronounced it a fibroid tumor of a cancerous nature, of large growth, and I was given a simple botanical treatment, which consisted of pills, rich and morning, and tonic three times daily, also oil to apply externally. Under this treatment the tumor commenced at once to disappear, coming away in long stringy masses, and now, at the end of six months, I feel entirely gone, my health the best it has been for years. I have gained weight, my appetite is good, do my own housework, and feel entirely well. I should be glad to see any one who is troubled in a similar manner and tell them all that Dr. Solomon has done for me.

I am gratefully yours, ANNIE E. REMICK.

## Cured of Cancer.

SOUTH NATICK, April 12th, 1898.

Dear Sir:—It is with the greatest of pleasure that I send you my testimonial, and I hope that you will live long enough to cure others, as you have cured me. I had cancer of the stomach, and I have suffered a great deal. I was treated by four of the best doctors, but they did me no good. They said that I would have to go to the hospital and have it cut out. This was in December, 1897. I did go to the Cancer Hospital, but I would not go under the knife of the surgeon. By a mere accident I read your wonderful cure of Mrs. B. F. Royce, and I made up my mind I would go and see you. I brought my wife and I went to your office. You said you could cure me without the use of the knife, and you did. I suffered no pain under your treatment. In five days from the first treatment the cancer was all out. I am in the best of health and my lip is all healed up, at it is as smooth and as well as ever. I am living in this town for 30 years, and am well known. I advise every one that has cancer or tumor to go and see you. I will be glad to tell anyone that calls on me to tell them what you have done for me.

JOHN ROGERS.

P. O. Box 31, South Natick, Mass.

## DR. SOLOMON,

Who has been located for years at 75 Court Street, Boston, is now located at his new office, 24 Beacon Street. He is a specialist in the treatment of cancers, tumors and chronic diseases.

OFFICE HOURS, 9 A. M. TO 6 P. M.

Sundays, 63 No. Main Street, Attleboro, Mass. Office Hours 12 M. to 3 P. M.

Any one wishing reference can have them by writing or calling at the doctor's office.

## The Funniest Book of the Century

"SAMANTHA AT SARATOGA; or RACIN' AFTER FASHION."

By JOSIAH ALLEN'S WIFE.

Illustrated with Over 60 Drawings by F. Oppel, the Greatest Comic Artist in New York.

Over 100,000 copies of the agents' edition in expensive binding were sold at \$2.50 each. This premium edition contains 374 pages, and gives all the reading matter and all the illustrations the same as the copies which sold at \$2.50 each. Over 200,000 copies of the premium edition have already been sold.

THERE IS A BUSHEL OF FUN IN EVERY CHAPTER.

its Pictures are Just Killing

This book was written under the inspiration of a summer season 'mid the world of fashion at Saratoga, the proudest pleasure resort of America. The book takes off Follies, Flirtations, Low-necked Dressing, Dudes, Pug-dogs, Tobogganing, and all the extremes of fashionable dissipation, in the author's inimitable and mirth-provoking style.

Children and grown-up people alike read with rapturous delight the story of Samantha's "tower" to Saratoga, accompanied by her "wayward parner," Josiah Allen. It is written in a vein of strong common sense, as pure and innocent as the prattle of a child, which keeps the reader constantly enjoying an ever fresh feast of fun.

## Woman's Home Companion

(FORMERLY LADIES HOME COMPANION.)

This popular ladies' journal, now in its twenty-fourth year, is as readable and attractive as the best writers and artists can make it. It is an unrivaled high-class magazine of general and home literature, profusely illustrated with exquisite drawings.

The Woman's Home Companion has no equal in the excellence of its special departments devoted to Fashions, Fancy Work, Housekeeping, Floriculture, Talks with Girls, Mothers' Chat, Home Adornment, Children, etc. Of the noted writers who will contribute their best work to the columns of the Companion during the coming year we have space to name only a few: Mrs. Mary J. Holmes, Josiah Allen's Wife, Opie Reed, Harriet Prescott Spofford, Julia Langruder, Hekziah Butterworth, and many others. The Companion gives 24 to 32 pages, size 11 by 16 inches, each issue, printed on fine paper and put into a handsomely illustrated cover. Specimen copy free upon request.

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